Response to Comment (By Author)

Project: Como Forest Health Project (FHP) (33829)

Comment Period: Notice of Availability - NOA

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Author(s)	Comment	Response
Artley, Dick		Comment is personal opinion
	I am currently composing my comments on the Como timber sale. Ranger Oliver euphemistically calls it the "Como Forest Health Project." It's too bad Congress didn't foresee the need to legally prohibit "public servants" from tricking and deceiving the public they claim to serve for personal gain. As I compose my comments I don't know whether to laugh or cry. Even my beginning NEPA students on the first day of class would have been able to easily spot the problems with the DEIS. Ranger Oliver owes you an apology and the IDT owes him an apology. This project proposal and DEIS is truly an assault on the sensibilities of the American public. Had he even skimmed the DEIS he would have concluded it wasn't even close to being a product that should be released to the public. Unfortunately, since you are listed as the Responsible Official, many members of the public will think you are responsible.	

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Artley, Dick	· Log within 100 feet of the bank of Lake Como · Log within 150 feet of 3 developed campgrounds near the lake[...]	Table 2.2-5, on page 2-16, of the DEIS states that a Riparian Habitat Conservation Area of "150 feet on each side of ponds, lakes or wetlands > 1 acre in area" will be applied to any such riparian areas found on the project. The DEIS goes on to state on page 2-17 that "trees will not be harvested from Riparian Habitat Conservation Areas" except for units 70, 73, 74, and 75. Unit 8 is the only cutting unit in the immediate vicinity of Lake Como and would have a 150 foot no-cut buffer from the high-water mark.
Artley, Dick	Even proposing this project shows Ranger Oliver's disdain for the recreating public. He proposes to:	While units 8, 16, and 59 are in the vicinity of 3 Frogs Campground, no logging activity is proposed within 150 feet of the campground loop.
Artley, Dick	Indeed, the location Ranger Oliver selected to get his wood near Lake Como is the last place a responsible public servant would propose for roading and logging.	The commercial harvest units within the project are all located in the suitable timber base designated in the Bitterroot Forest Plan.
Artley, Dick	He follows up his proposal to back-hand the public with the worst attempt to comply with NEPA, NFMA and ESA I have ever seen	Comment is personal opinion

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Artley, Dick		Comment will be taken into consideration by the Deciding Official
	1) Withdraw the tragic Como timber sale proposal immediately and never again let it see the light of day.	
Artley, Dick	please cite polls (with links to the poll itself) showing that Americans approve of such timber harvest in their national forest	
Artley, Dick	The Como timber sale will "treat" an undisclosed number of square miles of logging and an undisclosed number of miles of road.[...] • Why doesn't the sale area map show the location of the 6.3 miles of new road?	Table 2.4-1 of the DEIS provides a side-by-side comparison of the area treated and amount of road construction for each alternative. Figures 2.2-2, 2.2-3, and 2.2-4 show the location of proposed "New System Road", "Temporary Road", and "TLM or Excavated skid trail".

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Artley, Dick	The map of the Proposed Action on page 2-7 indicates you intend to log to within 200-300 feet of 2 developed campgrounds.	The southwestern boundary of Unit 59 is approximately 580 feet from campsite number 12 in Three Frogs Campground. The southern boundary of Unit 16 is approximately 350 feet from campsite number 12 in Three Frogs Campground. Measurements were estimated from campsite number 12 because it is the closest campsite to the units. These two units are north of the campground, across NFSR 5621, and not within the campground proper. The southern boundary of Unit 14 (which is a proposed non-commercial thin/fuels treatment) is approximately 470 feet from campsite number 8 in Lower Como Campground. Campsite number 8 is the closest campsite to the unit. This unit is north of the campground, across the Lake Como Road, and not within the campground proper. These distances, which are approximate figures, were extrapolated from ArcMap and did not take into effect the terrain. The actual distances will be greater.

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Artley, Dick	recreating public enjoying Lake Como apparently means you believe the public enjoys camping, hiking, fishing, among the stumps and dusty, hot skid trails and landings. If you would take the time to visit with your constituents, you would discover what the recreating public wants when they visit their national forests.	The Como Forest Health project area borders but does not encompass the northern part of Lake Como Recreation Area. There are no units within the Lake Como Recreation Area, therefore, there will be no stumps, skid trails, or landings within the Lake Como Recreation Area. Watershed and Fisheries design features, which are identified in Table 2.2-5 in the DEIS, will protect and provide buffers around Riparian Habitat Conservation Areas (RHCAs). Visitors fishing/recreating along Lake Como, Lick Creek, and/or Lost Horse will not be recreating among stumps, skid trails, or landings. The National Visitor Use Monitoring (NVUM) program provides reliable information about recreation visitors to national forest system managed lands at the national, regional, and forest level. Three rounds of NVUM surveys have been conducted on the Bitterroot National Forest from 2001 to 2012. The data from surveys conducted October 2011-September 2012 is not yet published yet. The data from surveys conducted in 2001 and 2006 is published in "The National Visitor Use Monitoring Results" document and updated November 2008 (USDA 2008). Customer satisfaction with four items (developed facilities, access, services, and perception of safety) in three areas (developed sites, undeveloped sites, and designated wilderness) was evaluated through survey questions. Data from the 2007 survey revealed that in undeveloped sites, such as the project area, 84% of those surveyed were satisfied with access (included parking availability, parking lot condition, road and trail conditions), 78% were satisfied with services (included availability of information, signange, employee helpfulness), and 94% were satisfied with the perception of safety.

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Artley, Dick	each environmental consequences disclosure for the "No Action" alternative goes overboard to stress why selecting the "No Action" alternative will result in tragic short and long term ecological consequences[...]if "No Action" is selected the resources in the area will not be harmed by logging and roading activities.	You are correct if the no action is selected none of the proposed activities will take place.
Artley, Dick	Professionals do not selectively choose literature citations that support their case and systematically exclude those that don't. [...]you have consciously selected literature for the References section that excludes science describing how logging will adversely affect non-timber natural resources in the sale area	There are 37 pages of literature citations in Appendix C which were used by Specialists in the preparation of the DEIS. The authors of these literature citations include University Professors, State and Federal Researchers, etc. The citations were used to describe and cite effects based on proposed treatments and not necesseraily only to support the project.
Artley, Dick	what constitutes best science? There are thousands of pages written by independent scientists describing the massive ecological damage caused by logging and forest road construction[...]This commenter's Opposing Views Attachments contain a small sample of available best science from non-USDA sources. Please be brave and read it.	The Response to Comment #9-6 also addresses this Comment #9-7
Artley, Dick	assure the kids born in the United States in 50 years[...]have an opportunity to escape the insanity. Quiet undeveloped places where people will find solitude will be precious.	The Bitterroot National Forest has approximately 750,000 acres of congressionally designated wilderness (Selway-Bitterroot, Frank Church-River of No Return, and Anaconda-Pintler Wilderness areas) that provide opportunities for solitude and isolation from developments of man. Table 3.12-1 identifies these Wilderness attributes. The Como Forest Health project is not within Wilderness. Recreation Opportunity Spectrum is a land classification system of six management class categories, each being defined by its setting, the probable recreation experiences,

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		and activities it affords. ROS is a management tool that assists planning for recreation opportunities. The six management classes are: urban, rural, roaded natural, semi-primitive motorized, semi-primitive non-motorized, and primitive. Urban ROS class settings are characterized by high levels of human activity and by concentrated development. Levels of recreation use vary and can be extremely high or dense. Rural class settings recognize that the sights and sounds of human activity are evident, but less pronounced and less concentrated than in the urban setting. Roaded natural class is characterized by predominantly natural-appearing settings, with moderate sights and sounds of human activities and structures. Semi-primitive motorized and non-motorized classes are characterized by predominantly natural or natural-appearing landscapes. Primitive class settings are essentially unmodified natural environments (USDA 1986). Visitors should expect to see resource management practices in this project area as it is not classified as a primitive ROS class. The majority of the project area (3,984 acres) is located within a roaded-natural recreation class. The roaded-natural class is characterized by predominantly natural-appearing settings, but evidence of human activities (timber harvest operations, roads, campgrounds, etc.) may be visible. The semi-primitive non-motorized recreation class (which is characterized as the most natural setting out of the classes in this project area) identifies that the presence of roads is tolerated, provided they are closed to public use (unless deemed as acceptable travelways for non-motorized), used infrequently for resource protection and management, and are visually appropriate for the physical setting (USDA 1986).

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Artley, Dick	read the statements of hundreds of independent, unbiased Ph.D. scientists in the Opposing Views Attachments who have no financial incentive to sell timber sales, you will realize this DEIS is not based on best science as the USFS promises will always be the case.[...]assuring their resources continue to function properly in and downstream from the sale area.	The Response to Comment #9-6 also addresses this Comment (#9-9)
Artley, Dick	The majority of your references are biased, since they were authored by forest service employees.	Of the 631 references cited in the DEIS, 169 (27%) are credited to the USDA Forest Service.
Artley, Dick	Anyone (including a judge) would agree that the research conclusions of hundreds of well respected scientists (many of which are college professors) represent best science. Your proposal to offer the Como timber sale in spite of the scientist's conclusion ignores best science, therefore you 1) violate the law, and 2) backhand the recreating public who seek out quietness, naturalness and solitude when visiting their public land.[...] Federal Register / Vol. 69, No. 188, page 58056	The Bitterroot National Forest has approximately 750,000 acres of congressionally designated wilderness (Selway-Bitterroot, Frank Church-River of No Return, and Anaconda-Pintler Wilderness areas) that provide opportunities for solitude and isolation from developments of man. Table 3.12-1 identifies these Wilderness attributes. The Como Forest Health project is not within Wilderness. Recreation Opportunity Spectrum is a land classification system of six management class categories, each being defined by its setting, the probable recreation experiences, and activities it affords. ROS is a management tool that assists planning for recreation opportunities. The six management classes are: urban, rural, roaded natural, semi-primitive motorized, semi-primitive non-motorized, and primitive. Urban ROS class settings are characterized by high levels of human activity and by concentrated development. Levels of recreation use vary and can be extremely high or dense. Rural class settings recognize that the sights and sounds of human activity are evident, but less pronounced and less concentrated than in the urban setting. Roaded natural class is characterized by predominantly natural-appearing settings, with moderate

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		sights and sounds of human activities and structures. Semi-primitive motorized and non-motorized classes are characterized by predominantly natural or natural-appearing landscapes. Primitive class settings are essentially unmodified natural environments (USDA 1986). Visitors should expect to see resource management practices in this project area as it is not classified as a primitive ROS class. The majority of the project area (3,984 acres) is located within a roaded-natural recreation class. The roaded-natural class is characterized by predominantly natural-appearing settings, but evidence of human activities (timber harvest operations, roads, campgrounds, etc.) may be visible. The semi-primitive non-motorized recreation class (which is characterized as the most natural setting out of the classes in this project area) identifies that the presence of roads is tolerated, provided they are closed to public use (unless deemed as acceptable travelways for non-motorized), used infrequently for resource protection and management, and are visually appropriate for the physical setting (USDA 1986).
Artley, Dick	Conifer trees make up just a tiny fraction of the natural resources in the forest.	Conifer trees are just one of the many resources in an ecosystem. Trees as one of the vegetation types cover most of the project area.
Artley, Dick	It’s not right that the USFS NFTM timber budget exceeds the budgets for fisheries, wildlife, heritage, recreation, soils, and hydrology combined.	How the Bitterroot National Forest's budget is allocated is beyond the scope of this project.
Artley, Dick	All healthy groups of living things include dead and dying individuals. Trees are no exception. Dead trees indicate the forest is a healthy forest, thus It’s ludicrous for the USFS to deceive the public by telling them healthy forests are composed of fast growing, vigorous trees.	Comment #9-14 is addressed in the DEIS, Silviculture Chapter 3.1

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Artley, Dick	In USFS lingo "to manage" and "to log" are synonyms.	Comment is addressed in DEIS, Chapter 1.1 through 1.7 and Chapter 2, Alternatives Considered in Detail
Artley, Dick	Include some source documents from the Opposing Views Attachments in the References section. Also, cite the specific quotes presented for the source literature chosen by this member of the public in the text. Finally, include clickable links to each Opposing Views Attachments you choose to include in your reference section.	Response to Comment #9-6 also addresses this Comment #9-16
Artley, Dick	A biodiverse, fully functioning forest contains many unhealthy stands which are usually low value climax tree species. The USFS policy is to eradicate this important forest condition so important to certain wildlife species.	Alternative 2 treats the most acres out of the four alternatives that were analyzed. Under Alternative 2, 2,397 acres of the 5,711 acre project area would not be treated, thereby providing wildlife habitat with climax tree species and diverse forest structure in the project area. Additionally, the project is adjacent to the Selway-Bitterroot wilderness where snags, mistletoe brooms and other important components of wildlife habitat exist. The Como Forest Health Project will not eradicate climax tree species, but will move low-elevation ponderosa pine stands closer to their historic characteristics. This habitat is also important to certain wildlife species.
Artley, Dick	The children born 50 years from today will not appreciate the ecological plunder you will cause with this timber sale.	The DEIS provides a resource-based analysis of the ecological effects. Future generations' appreciation of the project are impossible predict and entirely beyond the scope of the project.
Artley, Dick	Private, industrial tree farms are not forests … this includes national forest land manipulated to resemble a tree farm. There is no biodiversity.	The proposed silvicultural treatments create variabilty in stand structure, age classes and tree species composition as described on pages 3-43- 3-52 of the DEIS.
Artley, Dick	Private, industrial tree farm managers strive to create conditions that will foster fast growing, vigorous, large diameter trees … goals some USFS line-officers incorrectly try to achieve.	The purpose of the Como Forest Health Project is stated in Chapter 1 of the DEIS.

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Artley, Dick	All timber sales must be based on best science and ecological need. The benefits of any USFS timber sale must clearly exceed the harm caused by the timber sale activities to the natural resources in and downstream from the timber sale area.	Please see the FEIS section 3.7.4, Environmental Effects (Hydrology section) for a description of methods and associated citations. Potential effects summaries are included in Section 3.7 (Summary of Analysis) and 3.7.4.11 (Summary of Effects). Potential sediment effects for Lick Creek are detailed in Table 3.7-7 (Lick Creek Alternative 2 Road Crossing Sediment Estimates). Design Features and Mitigation Measures (page 3.7-23) and Effects Common to All Action Alternatives (section 3.7.4.8, pages 3.7-20 and 3.7-21) both suggest there is potential for only minor, short-term effects from Alternatives 2, 3 or 4.
Artley, Dick	Logging trees because the silviculturist declares the MAI has culminated and the trees are "decadent" is the agency's way to guarantee the elimination of old-growth and unique wildlife habitat.	Silvicultural compliance of laws, regulations and policy must be met for projects and activities carried out on National Forest Lands. One of those laws is Culmination of Mean Annual Increment [16 U.S.C. 1604 (m) 1921.12f FSH 1909,12, ch 61.3]. Under this law "Stands of trees harvested have generally reached the culmination of mean annual increment of growth, CMAI." "Generally, reached culmination" is defined as the age at which the stand acheives at least 95 percent of the cubic foot volume at culmination. The CMAI requirements only applies to even-aged management on lands suitable for timber production. The CMAI requirement does not apply to intermediate or un-evenaged harvests. There is no planned even-aged harvest in the project. The DEIS on page 3-2 has been updated to reflect this.
Artley, Dick		The Bitterroot National Forest has approximately 750,000 acres of congressionally designated wilderness (Selway-Bitterroot, Frank Church-River of No Return, and Anaconda-Pintler Wilderness areas) that provide opportunities for solitude and isolation from developments of man. Table 3.12-1 identifies these Wilderness attributes. The Como Forest Health project is not within Wilderness.

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	Most Americans want future generations of kids to have the opportunity to experience the quietness and solitude in a real, undeveloped forest. This will become more important in 2050 when the predicted population of the United States will be 438 million people. The wild UNDEVELOPED national forests will provide one of the only escapes from the insanity of a world driven even more by money than it is now.	Recreation Opportunity Spectrum is a land classification system of six management class categories, each being defined by its setting, the probable recreation experiences, and activities it affords. ROS is a management tool that assists planning for recreation opportunities. The six management classes are: urban, rural, roaded natural, semi-primitive motorized, semi-primitive non-motorized, and primitive. Urban ROS class settings are characterized by high levels of human activity and by concentrated development. Levels of recreation use vary and can be extremely high or dense. Rural class settings recognize that the sights and sounds of human activity are evident, but less pronounced and less concentrated than in the urban setting. Roaded natural class is characterized by predominantly natural-appearing settings, with moderate sights and sounds of human activities and structures. Semi-primitive motorized and non-motorized classes are characterized by predominantly natural or natural-appearing landscapes. Primitive class settings are essentially unmodified natural environments (USDA 1986). Visitors should expect to see resource management practices in this project area as it is not classified as a primitive ROS class. The majority of the project area (3,984 acres) is located within a roaded-natural recreation class. The roaded-natural class is characterized by predominantly natural-appearing settings, but evidence of human activities (timber harvest operations, roads, campgrounds, etc.) may be visible. The semi-primitive non-motorized recreation class (which is characterized as the most natural setting out of the classes in this project area) identifies that the presence of roads is tolerated, provided they are closed to public use (unless deemed as acceptable travelways for non-motorized), used infrequently for resource protection and management,

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		and are visually appropriate for the physical setting (USDA 1986).
Artley, Dick	The Como timber sale is taking away more undeveloped national forest acres from the legacy the unborn kids of the future deserve.	The project area is far from undeveloped, having experienced some level of timber harvest during every decade of the 20th century. Developed infrastructure in or adjacent to the project include roads, irrigation, and recreation facilities.
Artley, Dick	Chapter 3 effects disclosures that are word for word duplicates of prior NEPA documents?[...]What are the chances that the ecological conditions of several timber sales separated by hundreds of miles are identical?	The existing condition assessments for all resource areas on the Como FHP involved site-specific field surveys and data collection as documented in the Project File and as summarized in the DEIS, Chapter 3 narratives for each specialty.
Artley, Dick	Most people won't stand for being deceived by people who accept their tax dollars while simultaneously backhanding them for corporate benefit.	The purpose of the project is clearly stated in Chapter 1 of the DEIS.
Artley, Dick	1) the "No Action" alternative must be rejected, 2) the timber sale will benefit the amenity resources in the area in the "long term."	Comment will be taken into consideration by the Deciding Official.

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Artley, Dick	Is spending all of your NFTM dollars and meeting volume expectations this FY really that important?	Comment is addressed in the DEIS, Ch. 1.3, Purpose and Need
Artley, Dick	1) All resources near the sale area will be destroyed by wildfire if logging does not occur. You parrot USFS lies. Best science shows fire intensity does not subside when fires reach logged areas. Learn what the experts say about the folly of reducing fuels to moderate fire behavior by reading Opposing Viewpoints Attachment #3.	Fire intensity changes fire behavior when it hits treated thinned stands as long as the additional treatments (slashing the understory, piling, pile burning and understory burning) are completed and maintained over time. Treatments were modeled using FLAMMAP and on p 3-8 it talks about what happens to fire intensity. Decreases in fire type categories are due to a reduction of surface, ladder and canopy fuels. Additional reduction in fire type is expected outside of treatment areas because fires would flank around treatment areas. Under extreme weather and drought conditions fire intensity may not always changes but it does give firefighters a place to engage the fire (if feasible). A recent paper co-authored by Dr. Jack Cohen, David Calking, Mark Finney and Matthew P. Thompson "How Risk Management can prevent future wildfire disasters in the Wildlland -Urban Interface" http://www.fs.fed.us/rm/pubs_other/rmrs_2014_calkin_d002.html cited that "modern fire suppression organizations are highly effective under all but the most extreme weather conditions" p-747 which not coincidentally , typically create the largest fires. Approximately 3% of the fires are responsible for 97% of the area(s) burned. "Landscape condition cannot be ignored to realize fire-adapted communities because, by definition, WUI communities consist of more than homes. The wildland

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		component defines the environmental context and values for communities including views, recreation, watershed, and lifestyle benefits to the inhabitants" - p.750 which Lake Como represents. P. 750-751 "The goal of creating a fire-adapted WUI community is not achievable by focusing solely within the HIZ, but must encompass the land management options afforded by the ecological requirements of the wildland ecosystems. Low-elevation forests are amenable to treatments that supplement the ecological dependency on fire and also mitigate effects and spread of wildfires under extreme conditions. Fires in grasslands, shrub lands, and high-elevation forests do not offer mitigation opportunities that align easily with ecological requirements. With such vegetation imposed constraints on landscape management, the remaining options for risk mitigation are those that protect structures and improve community preparedness for inevitably extreme fire behavior and effects. Wildfire risk in places like the Colorado foothills, however, can greatly benefit from landscape treatment that reduces the probability of wildfire spread, severity of watershed impacts, and the likelihood of loss of wildland and developed assets provided that the treatment amounts, locations, and prescriptions are well targeted toward realistic wildfire conditions. http://www.fs.fed.us/rm/pubs_other/rmrs_2014_calkin_d002.html

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Artley, Dick	the primary reason you are proposing this sale is personal. You know you must not have a penny of unspent NFTM money at the end of the fiscal year to assure next year's budget won't be reduced, and you know you must display your capability to remove volume (a.k.a. "get out the cut") to maintain your promotion potential in an agency with a timber agenda and culture	Comment is addressed in the DEIS, Chapter 1.3, Purpose and Need
Artley, Dick	2) Logging will improve aquatic resources and water quality because road decommissioning/obliteration will not occur without the timber sale. You don't tell the public how log you have known the road induced sediment was harming stream conditions and why decommissioning/obliteration didn't occur then.[...]sediment CREATED by the timber sale activities (temp and system road construction, temp and system road reconstruction, landing construction, skid train construction, fireline construction etc.) is much greater than any sediment reduction from decommissioning existing roads.	Road reviews are often completed during specialist field review for timber sales for cost-effectiveness. The ground disturbance associated with decomissioning must be documented with a NEPA-compliant process, which costs money. Therefore the NEPA is combined with timber sale projects to reduce government paperwork and costs.
Artley, Dick	You know you have described goals that will inflict long-term harm to the natural biodiversity of the area. When logging reduces forest biodiversity it might be restored only after centuries without human manipulation.	Comment is addressed in the DEIS, Chapter 3, Affected Environment and Environmental Consequences
Artley, Dick	Reasonable people would have doubts about the wisdom of their proposal that is likely to create major adverse impacts as described by hundreds of Ph.D. scientists to whatever they are charged with protecting.	Comment is addressed in the DEIS, Chapter 3, Affected Environment and Environmental Consequences

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Artley, Dick	direct and indirect effects of the No Action alternative in timber sale NEPA documents.[...]simply describe the existing condition of their resource and then list the logging-related damage that won't be inflicted on their resource if No Action is chosen. Want a few hints on what this damage will be? Read Opposing Viewpoints Attachments #1 and #4.	Comment is addressed in the DEIS, Chapter 3, Affected Environment and Environmental Consequences
Artley, Dick	recommendations to log the area are at odds with several hundred scientists quoted in the Opposing Views Attachments. Reasonable, intelligent, responsible public servants would know whose advice to accept. How do you justify not following the advice of the experts?	In the DEIS, Chapter 3, Affected Environment and Environmental Consequences, the Interdisciplinary Team of Forest Service professionals in each resource specialty area evaluated the existing resource conditions and analyzed how the effects of the alternatives related to the issues raised during the NEPA process.
Artley, Dick	Had you included a wildlife iologist on the IDT (see list of IDT memers in Appendix) you would have had a professional effects analysis. They would have known the following science.[...] Information that's not disclosed here: "Animals, as well as plants, can benefit from fire. Some individual animals may be killed, especially by catastrophic fires, but populations and communities are rarely threatened. Many species are attracted to burned areas following fires — some even during or immediately after the fire." Congressional Research Service Report "Forest Fire/Wildfire Protection" February 14, 2005 http://www.coloradofirecamp.com/congressional_research/forest-fire-wildfire-effects.htm	A wildlife biologist was part of the IDT (See the second page of Appendix E). It is true that animals can benefit from fire and this is stated in the DEIS in several places. The DEIS acknowledges that fire benefits wildlife by creating successional vegetation stages that provide foraging and denning areas of Canada lynx and snowshoe hare (pg 3-136 and Table 3.3-12) creating new roosting habitat and increasing solar radiation that reaches exisiting roosts for bats (page 3-155) creating primary foraging habitat for black-backed woodpeckers (pg 3-156) improving foraging conditions for flammulated owls (pg 3-185) improving western toad habitat in areas of low and moderate severity burning (pg 3-200) and stimulating forage production for elk (pg 3-228). While this is not an exhuastive list of how the DEIS identifies the beneficial aspects of fire, both unplanned and planned, it does indicate that the science identified in the suggested citation has been considered thoroughly.

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Artley, Dick	Do any of your IDT members still think they are serving the public and treating public land in a worthwhile manner with the knowledge that USFS commodity output projects are opposed by all independent scientists in America with no ties to the USDA	Comment is personal opinion
Artley, Dick	"it will all burn up if we don't log" excuse to reject No Action.	Comment is addressed in the DEIS, Chapter 1.3, Purpose and Need for Action
Artley, Dick	you really believe the public dislikes red trees more than no trees at all and logging damage.	Como FHP DEIS does not state that that tree thinning and resulting impacts from logging would have less impacts on scenic integrity then red trees or typical tree mortality resulting from beetle kill.
Artley, Dick	Had you included a wildlife soils scientist on the IDT (see list of IDT memers in Appendix) you would have had a professional effects analysis.	A professional soil scientist completed all field review, analyses, and the discussion of effects on soils for the project. Please see the list of preparers in DEIS Appendix E for information.
Artley, Dick	Your IDT conveniently fails to tell the public the odds that a fire will occur in the area and the last time the area was really threatened by fire. Of course there is 100% chance the logging and roading treatments will pummel the amenity resources in and downstream from the sale area.	Comment is addressed in the DEIS, Ch. 3.2, Fire and Fuels Management, which describes the fire regimes, mean fire return intervals and fire history with maps, tables and narrative.
Artley, Dick	The effects disclosures[...]ignore the research conclusions by independent scientists explaining how and why fires increase in intensity when they encounter cutover areas. This science is upheld by empirical evidence … usually aerial photos and eyewitness accounts of what they observed. Withholding this important information from the public is a lie by omission. Here are just a few of the many examples contained in the Opposing Views Attachments:	Comment is addressed in the DEIS narratives in Chapters 3.2 (Fire and Fuels Mgmt), 3.3 (Wildlife), 3.6 (Soils) and 3.7 (Hydrology).

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	"The current focus on 'fuels' is, in itself, misguided because almost anything in a forest will burn, given the right conditions. Any fire specialist will tell you that the principal factors affecting fire are temperature and moisture, not fuels. No legislation will prevent or even reduce fires in the vast areas of the national forests and to pretend so is fraudulent." Partridge, Arthur Ph.D., Professor Emeritus, University of Idaho Testimony to the Agriculture, Nutrition and Forestry Committee United State Senate. Hearing to Review Healthy Forests Restoration Act, HR 1904 June 26, 2003 http://www.univision.co.za/offer-day-oA2A392Cr1N3B2x_2F2du3g3-music.shtml "It is well established that logging and roadbuilding often increase both fuel loading and fire risk. For example, the Sierra Nevada Ecosystem Project (SNEP) Science Team (1996) concluded that "timber harvest…. has increased fire severity more than any other recent human activity" in the Sierra Nevada. Timber harvest may increase fire hazard by drying of microclimate associated with canopy opening and with roads, by increases in fuel loading by generation of activity fuels, by increases in ignition sources associated with machinery and roads, by changes in species composition due to opening of stands, by the spread of highly flammable non native weeds, insects and disease, and by decreases in forest health associated with damage to soil and residual trees (DellaSala and Frost, 2001; Graham et al., 2001; Weatherspoon et al., 1992; SNEP Science Team, 1996). Indeed a recent literature	

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	review reported that some studies have found a positive correlation between the occurrence of past logging and present fire hazard in some forest types in the Interior Columbia Basin (DellaSala and Frost, 2001)." Roberson, Emily B. Ph.D., Senior Policy Analyst, California Native Plant Society Excerpt from a letter to Chief Dale Bosworth and 5 members of congress, 2002 http://www.plantsocieties.org/PDFs/Fire%20letter%20CNPS%208.02%20letterhead.pdf "Most of the trees that should be removed to reduce accumulated fuels are small in diameter and have little or no commercial value." "Mechanically removing fuels (through commercial timber harvesting and other means) can also have adverse effects on wildlife habitat and water quality in many areas. Officials told GAO that, because of these effects, a large-scale expansion of commercial timber harvesting alone for removing materials would not be feasible. However, because the Forest Service relies on the timber program for funding many of its activities (including reducing fuels) it has often used this program to address the wildfire problem. The difficulty with such an approach, however, is that the lands with commercially valuable timber are often not those with the greatest wildfire hazards." Government Accounting Office "Western National Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats" GAO/RCED-99-65	

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	http://www.gao.gov/archive/1999/rc99065.pdf Finally, consider this paper published in "Counterpunch": http://www.counterpunch.org/wuerthner06122009.html	
Artley, Dick	Request for changes to be made to the final NEPA document: Rewrite Chapter 3 with a new IDT and instruct them to 1) include accurate, professional, complete, honest effects disclosures, or 2) provide unbiased science (not authored by a USDA employee) that supports the natural resource disclosures shown above written by members of the current IDT.	Comment is addressed in the narratives and references cited in the DEIS, Ch. 3, Affected Environment and Environmental Consequences.
Artley, Dick	Also, please assure that there are explicit, clear discussions in Chapter 3 each time the IDT member indicates planned mitigation will reduce/eliminate the predicted resource damage caused by sale implementation. These discussions should include the following: 1) the enforcement process to assure the purchaser has correctly applied the mitigation according to USFS specifications, 2) a description of the mitigation implementation and effectiveness monitoring plan, 3) a description of the baseline resource conditions that existed before project implementation that will be monitored to assure the mitigation is effective, and 4) outside experts and information sources used to determine the appropriate mitigation for the specific condition at hand.	Comment on mitigation measures (also design features) is addressed in the DEIS, Ch. 2.2.5.2. A Monitoring Plan is included in the Final Environment Impact Statement.

Author(s)	Comment	Response
Artley, Dick	Request for changes to be made to the final NEPA document: Add a wildlife biologist and soils scientist to the IDT and have him/her professionally assess and re-write and effects of logging and roading activities on the soils and wildlife resources. Also, assure that this the wildlife biologist and soils scientist are named as an IDT members.	A professional soil scientist completed all field review, analyses, and the discussion of effects on soils for the project. Please see the list of preparers in DEIS Appendix E for information. A professional wildlife biologist completed all field reviews, analyses, and discussion of effects on wildlife for the project, including road building and logging. Please see the list of preparers in the DEIS Appendix E for information.
Artley, Dick	The Como DEIS does not discuss how the timber sale's logging and slash/RX burning activities will be mitigated to assure protected bird species' individuals and their habitat are not harmed in any way.[...] Comment: The 150-page wildlife effects section in Chapter 3 of the Como DEIS does not address nor even mention neotropical migratory birds.[...] Request for changes to be made to the final NEPA document: Identify the birds that exist in and near the project area that are protected under the Migratory Bird Treaty Act and discuss how these birds will be affected by burning and timber harvest operations.	Thank you for letting us know that we missed addressing neotropical migratory birds and the Migratory Bird Treaty Act in the Draft EIS. This was an unintentional oversight. Section 3.3.14 Forest Land Birds was added to the wildlife report of the Final EIS in order to identify the bird species that exist in and near the project area, the project effects on those species, and project compliance with the Migratory Bird Treaty Act.
Artley, Dick	Rey's "fuels reduction" solution conjured up in 2003 has been proven to be less effective at reducing the risk of fire damage to homes located in the WUI than applying Dr. Cohen's fine fuels removal methods near the homes. Prior to 2003 the USFS didn't claim the need to remove fuels as a reason to implement a timber sale.	The Bitter Root RC&D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make

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		this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. Program Highlights: • $3,536,604 received in grant funds to the Bitter Root RC&D 3-county area • $2.6 million in grant funds utilized to date • $2.9 million in matching landowner contributions to date • $462,000 in grant funds to support other RC&Ds in Montana • Nearly 5,100 private land acres signed-up • Nearly 4,200 of those acres have treatment completed • 687 private landowners participating • 602 landowners completed treatment plan • 445 project areas hired private contactors Property owners need to address the "little things" first. NFPA advises property owners to start with the house and work their way out. Having a nonflammable roof covering and assembly adds an enormous safety measure. Keeping roofs and gutters clean and clear of leaves or needles is critical to minimizing ignition from embers. Flammable attachments (e.g., untreated wooden decks) are very vulnerable to ignition and can carry fire to the main structure. Keep flat surfaces clear of debris. Clean out any leaves, needles or stored material that could burn from under decks or porches. During the high fire danger season, remove large potential heat sources such as piles of firewood, spare building materials, vehicles - anything that could catch embers or ignite by flames in the grass needs to be as far away from dwellings as possible. http://www.firewise.org/wildfire-preparedness/be-firewise/home-and-landscape/defensible-space.aspx. Dr. Cohen provides recommendations that private landowners consider when living in the wildland urban

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		interface zones. Bitterroot RC&D helps state and private land owners shoulder that responsibility but ultimately it's a personal decision a person must make. Every fire here on the Bitterroot motivates people to seek out grants and resource programs to reduce fuels on private lands but other issues related to roof composition, siding, that contribute to flammability of structures is solely determined by the land owner or influenced by homeowners associations or cost of insurance policies and fire education programs. The US Forest Service role in the Lake Como Forest Health Project aims to reduce the risk that fire would burn onto private lands with fuels reduction on National Forest. We delineate a WUI line on our map as a way of showing the path of possible fire travel towards private lands should a fire start and try to slow the path of those future fires from getting to the private lands. National Forest supports Cohen's recommendations and State and Private Forestry help to fund those initiatives. http://bitterrootrcd.org/hazardousFuels.htm
Artley, Dick		The Bitter Root RC&D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. Program Highlights: • $3,536,604 received in grant funds to the Bitter Root RC&D 3-county area

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	Anyone with the responsibility to protect homes and human lives in the WUI should a wildfire occur would use any and all effective methods to achieve that important goal.[...] A Burning Issue: Helping Loggers, Hurting Forests By Chad Hanson Published on Monday, July 15, 2002 in the Los Angeles Times Source: http://www.commondreams.org/views02/0715-04.htm Conflicting Reports Shade Forest Fire Debate By Cat Lazaroff Published by ENS on July 11, 2002 Source: http://www.ens-newswire.com/ens/jul2002/2002-07-11-06.asp Fight Fire With Logging? By Dan Okoand Ilan Kayatsky Published by Mother Jones magazine, Wed Jul. 31, 2002 Source: http://www.motherjones.com/politics/2002/08/fight-fire-logging Bush official doesn't apologize for timber policies By Matthew Daly Published by the Juneau Empire, Monday, February 25, 2008 Source: http://juneauempire.com/stories/022508/sta_250859398.shtml	• $2.6 million in grant funds utilized to date • $2.9 million in matching landowner contributions to date • $462,000 in grant funds to support other RC&Ds in Montana • Nearly 5,100 private land acres signed-up • Nearly 4,200 of those acres have treatment completed • 687 private landowners participating • 602 landowners completed treatment plan • 445 project areas hired private contactors Property owners need to address the "little things" first. NFPA advises property owners to start with the house and work their way out. Having a nonflammable roof covering and assembly adds an enormous safety measure. Keeping roofs and gutters clean and clear of leaves or needles is critical to minimizing ignition from embers. Flammable attachments (e.g., untreated wooden decks) are very vulnerable to ignition and can carry fire to the main structure. Keep flat surfaces clear of debris. Clean out any leaves, needles or stored material that could burn from under decks or porches. During the high fire danger season, remove large potential heat sources such as piles of firewood, spare building materials, vehicles - anything that could catch embers or ignite by flames in the grass needs to be as far away from dwellings as possible. http://www.firewise.org/wildfire-preparedness/be-firewise/home-and-landscape/defensible-space.aspx. Dr. Cohen provides recommendations that private landowners consider when living in the wildland urban interface zones. Bitterroot RC&D helps state and private land owners shoulder that responsibility but ultimately it's a personal decision a person must make. Every fire here on the Bitterroot motivates people to seek out grants and resource programs to reduce fuels on private lands but other issues related to roof composition, siding, that contribute to

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Artley, Dick	Comment: Dr. Cohen has authored many science documents describing his methods. A few excerpts are included below. As you can see, Dr. Cohen has repeatedly stated in public that fuels removal that's not immediately adjacent to structures at risk (as you are proposing) is ineffective.[...] Dr. Cohen states: "As stated, the evidence indicates that home ignitions depend on the home materials and design and only those flammables within a few tens of meters of the home (home ignitability). The wildland fuel characteristics beyond the home site have little if any significance to WUI home fire losses." (Pg. 5)[...] Source for quote above: Reducing the Wildland Fire Threat to Homes: Where and How Much? Presented as the Fire Economics Symposium in San Diego, California on April 12, 1999. http://www.fs.fed.us/rm/pubs_other/rmrs_1999_cohen_j001.pdf	Fire intensity changes fire behavior when it hits treated thinned stands as long as the additional treatments (slashing the understory, piling, pile burning and understory burning) are completed and maintained over time. Treatments were modeled using FLAMMAP and on p 3-8 it talks about what happens to fire intensity. Decreases in fire type categories are due to a reduction of surface, ladder and canopy fuels. Additional reduction in fire type is expected outside of treatment areas because fires would flank around treatment areas. Under extreme weather and drought conditions fire intensity may not always changes but it does give firefighters a place to engage the fire (if feasible). A recent paper co-authored by Dr. Jack Cohen, David Calking, Mark Finney and Matthew P. Thompson "How Risk Management can prevent future wildfire disasters in the Wildlland -Urban Interface" http://www.fs.fed.us/rm/pubs_other/rmrs_2014_calkin_d002.html cited that "modern fire suppression organizations are highly effective under all but the most extreme weather conditions" p-

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	Dr. Cohen states: "Vegetation management beyond the structure's immediate vicinity has little effect on structure ignitions. That is, vegetation management adjacent to the structure would prevent ignitions from flame exposure; but vegetation management away from the structure would not affect ignition from flame exposure and would not significantly reduce ignitions from firebrands." (Pg. 4) Source for quote above: Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States Published in Forest Ecology and Management 256, 2008 http://www.firewise.org/Information/Research-and-Guidance/WUI-Home-Ignition-Research/~/media/Firewise/Files/Pdfs/Research/CohenFuelTreatment.pdf Dr. Cohen states: "Effective landscape fuel reduction does not necessarily prevent W-UI home fire destruction." (Pg. 10) Source for quote above: Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States Published in Forest Ecology and Management 256, 2008 http://www.firewise.org/Information/Research-and-Guidance/WUI-Home-Ignition-Research/~/media/Firewise/Files/Pdfs/Research/CohenFuelTreatment.pdf	747 which not coincidentally , typically create the largest fires. Approximately 3% of the fires are responsible for 97% of the area(s) burned. "Landscape condition cannot be ignored to realize fire-adapted communities because, by definition, WUI communities consist of more than homes. The wildland component defines the environmental context and values for communities including views, recreation, watershed, and lifestyle benefits to the inhabitants" - p.750 which Lake Como represents. P. 750-751 "The goal of creating a fire-adapted WUI community is not achievable by focusing solely within the HIZ, but must encompass the land management options afforded by the ecological requirements of the wildland ecosystems. Low-elevation forests are amenable to treatments that supplement the ecological dependency on fire and also mitigate effects and spread of wildfires under extreme conditions. Fires in grasslands, shrub lands, and high-elevation forests do not offer mitigation opportunities that align easily with ecological requirements. With such vegetation imposed constraints on landscape management, the remaining options for risk mitigation are those that protect structures and improve community preparedness for inevitably extreme fire behavior and effects. Wildfire risk in places like the Colorado foothills, however, can greatly benefit from landscape treatment that reduces the probability of wildfire spread, severity of watershed impacts, and the likelihood of loss of wildland and developed assets provided that the treatment amounts, locations, and prescriptions are well targeted toward realistic wildfire conditions. http://www.fs.fed.us/rm/pubs_other/rmrs_2014_calkin_d002.ht

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Artley, Dick	Clearly THE most important responsibility of a public land manager is to protect the safety of the public. Some caring, competent public servants opt to apply Dr. Cohen's methods to reduce the risk of fire damage to homes located in the WUI in lieu of commercial logging. Please join these public servants.	ml The Bitter Root RC&D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. Program Highlights: • $3,536,604 received in grant funds to the Bitter Root RC&D 3-county area • $2.6 million in grant funds utilized to date • $2.9 million in matching landowner contributions to date • $462,000 in grant funds to support other RC&Ds in Montana • Nearly 5,100 private land acres signed-up • Nearly 4,200 of those acres have treatment completed • 687 private landowners participating • 602 landowners completed treatment plan • 445 project areas hired private contactors Property owners need to address the "little things" first. NFPA advises property owners to start with the house and work their way out. Having a nonflammable roof covering and assembly adds an enormous safety measure. Keeping roofs and gutters clean and clear of leaves or needles is critical to minimizing ignition from embers. Flammable attachments (e.g., untreated wooden decks) are very vulnerable to ignition and can carry

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Artley, Dick		An alternative implementing Dr. Cohen's work would be similar to the No Action alternative since his recommedations pertain to private land owners in fire risk areas. Private landowners should consider Dr. Cohen's recommendations when living in the wildland urban interface zones. The

Author(s)	Comment	Response
	have you told the public living in the WUI why you won't consider a Dr. Cohen alternative? How will you explain to the residents who loose their homes that you knew about Dr. Cohen's research conclusions and decided to ignore them? Chapter 2 does not mention Dr. Cohen's name. Did volume influence your decision to consider human deaths as collateral damage?	Bitterroot RC and D helps state and private land owners fund fuels management work but ultimately it a personal decision a person must make. Every fire here on the Bitterroot motivates people to seek out grants and resource programs to reduce fuels on private lands but other issues related to roof composition, siding, that contribute to flammability of structures is solely determined by the land owner or influenced by homeowners associations or cost of insurance policies and fire education programs. The Bitter Root RC and D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. Program Highlight: • $3,536,604 received in grant funds to the Bitter Root RC and D 3-county area. • $2.6 million in grant funds utilized to date • $2.9 million in matching landowner contributions to date. • $462,000 in grant funds to support other RC and Ds in Montana • Nearly 5,100 private land acres signed-up • Nearly 4,200 of those acres have treatment completed • 687 private landowners participating • 602 landowners completed treatment plan

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Artley, Dick	A couple of years ago I went on a show me tour of a Forest Service Thinning project that was funded under the National Fire Plan (NFP). A group of us, including some forest service employees, a university fire researcher, country commissioners, timber interests, and the like gathered at the	On page 1-2 of the DEIS, The purpose and need of the Como Forest Health project is to: • Reduce the potential mountain pine beetle caused mortality in large diameter ponderosa pine • Reduce the fuel loads and maintain historical fire return intervals in the project area. • Improve forest resilience to mountain pine beetle,

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	Forest Service office. The district ranger explained that we were going to see a fuel reduction project designed to protect the small town where we were standing. After giving preliminary background on the proposed timber sale, we got into a bunch of Forest Service vehicles and drove out of town. And drove. And drove. And drove. Eighteen miles from the town, we got out of the car to look at the thinning project. Standing among some ponderosa pine that had already been logged, many of them quite sizeable judging by the stumps, the district ranger and other Forest Service employees explained how this thinning project was designed to reduce the spread of fire into the community and eliminate so called "catastrophic fires." The presumption being that such fires are a result of fire suppression and fuel build up. The solution, proponents of logging argued, is to thin the forests and reduce fuels, hence eliminate large blazes. After all he and the others finished their presentation, they took questions and comments. The county commissioners said some approving remarks about how it was great the Forest Service was finally getting back into logging. The timber guys were happy—especially since they had retooled their mill to take smaller diameter trees. In general everyone seemed pleased with the proposal. Then I raised my hand, and asked why they were cutting trees here, when the town was eighteen miles away. Shouldn't they be thinning there? There was a silence. The district ranger, a reasonably intelligent and informed guy, kicked at the dust. He started to smile a bit and almost seemed relieved that I had posed the obvious question.	Douglas-fire beetle, and dwarf mistletoe • Maintain the visual integrity of the larger Lake Como Recreation Area A recent paper co-authored by Dr. Jack Cohen, David Calkin, Mark Finney and Matthew P. Thompson "How Risk Management can prevent future wildfire disasters in the Wildlland -Urban Interface" http://www.fs.fed.us/rm/pubs_other/rmrs_2014_calkin_d002.html cited that "modern fire suppression organizations are highly effective under all but the most extreme weather conditions" p-747 which not coincidentally , typically create the largest fires. Approximately 3% of the fires are responsible for 97% of the area(s) burned. "Landscape condition cannot be ignored to realize fire-adapted communities because, by definition, WUI communities consist of more than homes. The wildland component defines the environmental context and values for communities including views, recreation, watershed, and lifestyle benefits to the inhabitants" - p.750 which Lake Como represents. P. 750-751 "The goal of creating a fire-adapted WUI community is not achievable by focusing solely within the HIZ, but must encompass the land management options afforded by the ecological requirements of the wildland ecosystems. Low-elevation forests are amenable to treatments that supplement the ecological dependency on fire and also mitigate effects and spread of wildfires under extreme conditions. Fires in grasslands, shrub lands, and high-elevation forests do not offer mitigation opportunities that align easily with ecological requirements. With such vegetation

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	Finally he spoke and admitted yes they should probably be thinning next to the town if the goal was to protect the town but he indicated that he was under pressure just to get the cut out and the timber volume was greater here. He also admitted to us under further questioning that the thinned forests–under reduced competition resulting from the thinning efforts– would likely grow back quickly, and largely negate much of the supposed value of fuel reduction.[...] Schoennagel et al. reviewed 44,000 fuel treatments done across the West under the rubric of the National Fire Plan (NFP). Despite the fact that the plan directs that treatments should be done where they would be most effective at reducing fire hazards to homes and communities, their analysis showed that only 3% of all thinning projects were in the so called "Wildlands Urban Interface" (WUI). Most were like the thinning project I visited in Oregon—miles from any community. They also noted that the majority of land (83%) that could be treated within the WUI lies on private property. In other words, even if thinning did work to reduce fire intensity and spread, the focus on federal lands does little to effectively protect homes and communities. Many studies have demonstrated that the most cost effective means of reducing fire hazard to homes and towns is to reduce the flammability of individual homes, not by logging the forests.	imposed constraints on landscape management, the remaining options for risk mitigation are those that protect structures and improve community preparedness for inevitably extreme fire behavior and effects. Wildfire risk in places like the Colorado foothills, however, can greatly benefit from landscape treatment that reduces the probability of wildfire spread, severity of watershed impacts, and the likelihood of loss of wildland and developed assets provided that the treatment amounts, locations, and prescriptions are well targeted toward realistic wildfire conditions. http://www.fs.fed.us/rm/pubs_other/rmrs_2014_calkin_d002.html The Bitter Root RC& D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. Program Highlights

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Artley, Dick	A further problem touched on by the review is a failure to acknowledge by thinning proponents that climate plays a major role in driving large fires. If you have severe drought, low humidity and high winds—especially high winds—nothing can effectively stop a blaze. Basically you have to wait until the weather conditions change. In the hierarchy of factors that affects fire spread, climate trumps fuels. By contrast, if the weather/climate conditions are not	Prescribed fire, salvage logging in previously burned stands, and fuel reduction treatments (including the removal of slash, or woody debris, from branches and treetops) were effective in reducing fire severity and spread in the Rodeo-Chediski fire even under extreme weather conditions (figure 7 Wilmes et al. 2002), as predicted by restoration research in Arizona (Fule et al. 2002). High-severity crown fires affected 35% of the stands that had been treated within last 15 years, compared with 55% of the untreated stands. The average stand density of treated and untreated stands was 387 and 1108 trees per hectare, respectively. All prefire fuel treatments appeared to lower burn severity except for precommercial treatments, which increased it. In precommercial treatments, slash (branches and tree

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	favorable for fire spread, it doesn't matter how much fuel you have, you won't get a large blaze. There are tons of fuels per acre in West Coast rainforests, yet these forests seldom burn because they never dry out sufficiently for a blaze to grow into a large fire, even if one starts by lightning or from people. Yet there is more fuel in those forests per acre than you would find in a hundred acres of a drier forest.[...] Similarly, many high elevation forests in the West—think lodgepole pine in Yellowstone—are typically too wet to burn in most years. That is why fires in such forest types are infrequent, but when they do occur, they tend to be large blazes that kill many of the trees. The vast majority of acreage burnt in recent years by large fires isn't in the low elevation forests that may have been influenced by fire suppression and fuel-build up. They are occurring in forests that normally burn in mixed intensity to severe intensity stand replacement fires when conditions are right for such blazes. Considering that we have experienced extraordinary drought in many parts of the West, the fact that we are seeing large fires may not be "abnormal". Large stand replacement fires are exactly what one would expect in such forest types under severe climatic/weather conditions.	tops) was lopped and scattered throughout the stand which contributed to higher fuel loads than those in untreated stands. Areas that had high forage production and low tree density experienced less severe burning during the RodeoChediski fire, suggesting that open stands with abundant fine surface fuels were more resistant to high-severity canopy fire (figure 8). Overall, burn severity was positively correlated with overstory tree density (Wilmes et al. 2002). This outcome in clear contrast with the findings from Yellowstone (where weather rather than fuel type and arrangement influenced fire behavior), highlights the heterogeneity of forest types and fire effects across the Rocky Mountain region. The historical fire regime in these mixed severity forests is complex, including both low-severity surface fires and infrequent high-severity crown fires. Both fuels and climate have major influences on the frequency, severity, and size of fires. Fire suppression has had variable effects on fuel densities in mixed-severity fire regimes, with the greatest impacts on sites that formerly supported open woodlands. The occurrence of high-severity crown fires is not outside the historical range of variability, although their size and frequency may be increasing. Extreme climate and weather conditions can override the influence of stand structure and fuels on fire behavior. Fuel-reduction treatments (mechanical thinning and prescribed burning) may effectively reduce fire severity under moderate weather conditions, but these treatments may not effectively mitigate fire behavior under extreme weather conditions and may not restore the natural complexity of historical stand and landscape structure. We do not advocate delaying action until all of the ecological questions have been answered in many places, there is an urgent need and a solid ecological basis for restoration and fire-mitigation efforts. In other areas, however, where the ecological basis for aggressive fuel reduction is inadequate or lacking, uncritical extrapolation of models from

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		other systemsmay cause more harm than good. Mechanical Treatment and Prescribed Fire. A review of seven sites across the western U.S. as part of the National Fire and Fire Surrogate Study found that mechanical treatment combined with prescribed fire was the most effective at reducing the modeled severity of wildfire effects under extreme weather conditions (Hartsough et al. 2008). Crown thinnings and harvests can reduce canopy bulk density and the potential for active crown fire, and prescribed fire provides a good complement by decreasing surface fuels (Innes et al. 2006, Mason et al. 2007). In a Sierran mixed conifer stand, a combined crown and low thinning followed by prescribed fire significantly reduced predicted tree mortality due to the combination of reduced surface fuels and increased height to crown base ratio (Stephens and Moghaddas 2005a). A simulation based on Sierran mixed conifer data suggests that the increase in canopy base height is more important than the decrease in canopy bulk density in reducing spread rate (Dicus 2009). Thinning, particularly low or free thinning, followed by prescribed fire has been successful in reducing wildfire hazard and returning forest structural conditions to within HRV (Fulé et al. 2002, North et al. 2007). In a simulation of treatments in Sierran mixed conifer, harvests followed by fire provided the quickest path to restoring at least three aspects of forest structure and composition to historic conditions (Miller and Urban 2000). During the 2007 Angora Fire in the Lake Tahoe Basin, California, combined thinning and pile burning treatments 53Fuels Treatment for Mixed Conifer Forests reduced bole char height, crown scorching, torching, and mortality (Safford et al. 2009). Notably, the Lake Tahoe treatments were effective in changing fire behavior from an active crown fire to a surface fire (Safford et al. 2009). On the Lassen National Forest, managers have found that mechanical piling is more efficient than hand piling on larger

Author(s)	Comment	Response
		treatments, and grapple piling adds less soil to the pile than a Bobcat or bulldozer piling. However, in the WUI, neighbors prefer seeing hand piling rather than machines and near streams hand piling has less risk of sediment runoff. Many managers report burning piles when there is snow cover to help with control. The effectiveness of mechanical treatments combined with pile burning is similar to that of broadcast burning (Han et al. 2010). p. 53. http://nature.berkeley.edu/stephens-lab/Publications/Evans
Artley, Dick		The fireline fuel break would be constructed with hand fireline and chainsaw. There is an old dozer line on the west side of Burn Unit E from the Rock Creek fire from 1988 but we had no intention of using a bull dozer to clear the fireline -- it would be by handline construction by the local fire crew(s) - some chaninsaw work would be used to clear brush from the area we would want the handline. As for the mistletoe discussion if you refer to p. 3-24 to 3-25 of the DEIS (Silviculture and Forest Management) there are recommendations for girdling of trees that come from Forest Health Protection and when that could be used but in the DEIS alternatives we are not proposing any girdling at this time. The only areas in which trees will be girdled are in the aspen treatment units. These trees will be girdled in order to enhance the growing conditions for the aspen clones, not for snag creation. Snags that are recruited from this treatment will be a secondary benefit and will be left onsite. Girdled trees will not be included during post-treatment snag monitoring. Climate Change Mixed conifer forests are likely to continue to change during

Author(s)	Comment	Response
	But new research from around the West is even questioning the old that generalization that lower elevation dry montane forests were always characterized by low intensity frequent blazes. This idea, sometimes called the "Southwest Ponderosa Pine Model", has come to dominate the common perception about all forest types and fire behavior. In the Southwest ponderosa pine forests, there is good evidence to suggest that wildfire was frequent and tended to maintain open forest stands dominated by widely spaced large fire resistant pines. With fire suppression, logging, and livestock grazing, these forests are today stocked more densely, and some suggest, more prone to stand replacement blazes. People around the West apply this Southwest model to all forest types, even remote high elevation forests where few fires were successfully suppressed, and where natural fire intervals are much longer—meaning that fire suppression could not have contributed to significant alternation in fuel loads. However, muddling the waters further even on the Southwest ponderosa pine model is that researchers are finding is that in some parts of the country including Colorado, Idaho, Montana, Washington, Oregon, and elsewhere that stand replacement fires may be "natural" even in lower elevation dry montane forests dominated by ponderosa pine and Douglas fir. In other words, stand replacement blazes even in these forests are not out of the ordinary.	the 21st century. On average, the climate in mixed conifer forests is likely to be warmer and drier by the end of the 21st century than it was during the 20th century, with warmer spring and summer temperatures, reduced snowpack and earlier snowmelts, and longer, drier summer fire seasons (Westerling et al. 2006, IPCC 2007, Dominguez et al. 2010). Three lines of evidence predict that warming and drying conditions in mixed conifer forests are likely to cause increased fire activity: reconstructions of fire and climate in the past (Swetnam 1993, Frechette and Meyer 2009), trends over the last few decades (Westerling et al. 2006), and predictive models (Westerling and Bryant 2008). Other predicted effects of a warmer, drier climate include reduced growth and increased mortality in mixed conifer forests (van Mantgem and Stephenson 2007, van Mantgem et al. 2009). For 31Fuels Treatment for Mixed Conifer Forests example, modeling predicts declines in stem volume growth in Sierran mixed conifer due to increased summer temperatures (Battles et al. 2008). A warming climate and altered precipitation regimes will cause other ecosystem changes, such as increased success for bark beetles (Bentz et al. 2010). p. 31 "Comprehensive Fuels Treatment Practices Guide for Mixed Conifer Forests: Southern Rockies, CA and the Southwest

Author(s)	Comment	Response
Artley, Dick	Plus thinning can increase small diameter fuels which are the major factor in fire spread, so most research suggests that thinning effectiveness is greatly enhanced if the area is burned after logging to remove fine fuels. But most thinning operations do not use pre-burning to reduce fine fuels after logging operations are completed.	On page 2-22 to 2-23 of the DEIS there is a summary of acres being treated with prescribed fire (broadcast burning or a combination of piling post thinning, then pile burning to be followed up with broadcast burning where designated by unit summary. Whether its commercial or pre-commercial thinning a post treatment walk through is usually conducted to address too much slash left on site and recommendations for additional treatment(s) from leaving slash on ground because there is not enough CWD and to doesn't pose a long term fuels issue to piling/pull back of slash from large trees or piling among plantation units to rid excess slash and pile burning prior to underburning.
Artley, Dick	The time since a forest was thinned is yet another factor. The effectiveness of a thinning on fuel loading rapidly declines, which is why they cannot be thought of as a one-time treatment. Thinning reduces competition and opens up a forest canopy permitting rapid growth of understory shrubs and trees—which are the major components of fire spread. Depending on the vegetation, studies have shown that within 10-20 years, fuel loading can often return to pre-thinning levels. Thus any thinning done to supposedly reduce fire hazards must be thought of as an on-going treatment that requires continual maintenance. Doing such maintenance over millions of acres is impossible. That is another reason to focus thinning on the WUI and not miles from towns.	On page 3-79 of the DEIS it states that 58% of the area (3,259 acres) of the project area are delineated in the WUI (Wildland Urban Interface Zone). The Federal fire policy direction for planning wildfire suppression strategies prioritizes the protection of life above private property and protection natural resources. The Bitterroot National Forest has no authority to conduct fuel treatments or other wildland fire mitigations on private lands. That responsibility lies with State and Private Forestry and the State of Montana. The Bitter Root RC&D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. $3,536,604 received in grant funds to the Bitter Root RC&D 3-county area,

Author(s)	Comment	Response
		$2.6 million in grant funds utilized to date. $2.9 million in matching landowner contributions to date. $462,000 in grant funds to support other RC&Ds in Montana. Nearly 5,100 private land acres signed-up. Nearly 4,200 of those acres have treatment completed. 687 private landowners participating. 602 landowners completed treatment plan. 445 project areas hired private contactors. Property owners need to address the "little things" first. NFPA advises property owners to start with the house and work their way out. Having a nonflammable roof covering and assembly adds an enormous safety measure. Keeping roofs and gutters clean and clear of leaves or needles is critical to minimizing ignition from embers. Flammable attachments (e.g., untreated wooden decks) are very vulnerable to ignition and can carry fire to the main structure. Keep flat surfaces clear of debris. Clean out any leaves, needles or stored material that could burn from under decks or porches. During this high fire danger season, remove large potential heat sources such as piles of firewood, spare building materials, vehicles - anything that could catch embers or ignite by flames in the grass needs to be as far away from dwellings as possible. http://www.firewise.org/wildfire-preparedness/be-firewise/home-and-landscape/defensible-space. Dr. Cohen's recommendations are just that - recommendations that private landowners should consider when living in the wildland urban interface zones. Bitterroot RC&D helps state and private land owners shoulder that responsibility but ultimately it a personal decision a person must make. Every fire here on the Bitterroot motivates people to seek out grants and resource programs to reduce fuels on private lands but other issues related to roof composition, siding, that contribute to flammability of structures is solely determined by the land owner or influenced by homeowners associations or cost of insurance policies and fire education programs. The US Forest Service role in the

Author(s)	Comment	Response
		Lake Como project Forest Health Project aims to try and prevent wildfire from entering into the private lands through fuels reduction methods on USFS lands. We delineate a WUI line on our map as a way of showing the path of possible fire travel towards private lands should a wildfire start and try to slow the path of those future fires from getting to the private lands. National Forest supports Cohen's recommendations and State and Private Forestry help to fund those initiatives. http://bitterrootrcd.org/hazardousFuels.htm
Artley, Dick	Even if thinning did work to a degree, that doesn't mean it's the best solution to the perceived problem. Again circling back to the Schoennagel review, much of the "problem" isn't large fires—which have always occurred in the West under severe climatic conditions—rather it is the result of expansion of new housing into the wildlands. According to their review the Wildlands Urban Interface increased 61% between 1970 and 2000. This is primarily a result of inadequate or none-existent zoning. Had county commissioners, most of whom are so called "private property advocates", implemented strong zoning to concentrate housing in appropriate less fire prone areas, much of the hand wringing over fires could be avoided. Indeed, one could suggest that anti zoning zealots—often the same people who advocate logging—are the source of the fire hazard problem. Beyond zoning, reducing home flammability has been shown to be very effective at reducing housing losses to fire. Over the past five years, I have visited many fires where homes were incinerated. In the majority of the homes I have seen, the fire did not actually reach the house. I have striking	Your quote by "Schoennagel et al. reviewed 44,000 fuel treatments done across the West under the rubric of the National Fire Plan (NFP). Despite the fact that the plan directs that treatments should be done where they would be most effective at reducing fire hazards to homes and communities, their analysis showed that only 3% of all thinning projects were in the so called "Wildlands Urban Interface" (WUI). " If you refer to p. 3-79 of the DEIS 58% (3,629 acres) are in the WUI zone as defined by the Lake Como Project proposal. Local weather, fuel, topography, ignition patterns and the values at risk (not just homes) were considered when the Como Forest Health WUI was delineated. The mission of the Ravalli County Planning Department is to administer and facilitate the processes of land use planning, subdivision review, and floodplain management in order to promote a high quality of life while protecting the health, safety, and welfare of the citizens of Ravalli County. As per a paper "How Risk Management can prevent future wildfire disasters in the wildland urban interface" p. 750 "the goal of creating a fire-adapted WUI community is not

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	photos of burned out basements with green trees surrounding the home. In almost all cases, what has occurred is a spark carried by the wind lands on some house with a wooden shake roof covered with pine needles and the house burns to the ground. Installation of a metal roof, in many cases, is all that is needed to reduce home flammability significantly. Even subsidizing the replacement of wooden roofs with metal in vulnerable homes may be far less expensive than fighting fires and wasting tax dollars on money losing timber sales.	achievable by focusing solely within the HIZ, but must encompass the land management options afforded by the ecological requirements of the wildland ecosystems. Low-elevation forests are amenable to treatments that supplement the ecological dependency on fire and also mitigate effects and spread of wildfires under extreme conditions. Fires in grasslands, shrub lands, and high-elevation forests do not offer mitigation opportunities that align easily with ecological requirements. With such vegetation imposed constraints on landscape management, the remaining options for risk mitigation are those that protect structures and improve community preparedness for inevitably extreme fire behavior and effects. Wildfire risk in places like the Colorado foothills, however, can greatly benefit from landscape treatment that reduces the probability of wildfire spread, severity of watershed impacts, and the likelihood of loss of wildland and developed assets provided that the treatment amounts, locations, and prescriptions are well targeted toward realistic wildfire conditions."
Artley, Dick	Finally, and I always circle back to this last factor, logging is not benign. There is no such thing as a "good" logging operation. There are few truly "sustainable" logging operations. These are clever ruses to deceive the public. Logging always has significant ecological impacts and we should always enunciate them. Whether the benefits that may accuse from logging in terms of wood products, and even in some cases, a reduction in fire hazard are worth the true ecological costs is often difficult to determine because few reviews fully articulate the real costs.	Comment regarding impacts is addressed in the analysis of environmental consequences contained in the DEIS, Chapter 3.

Author(s)	Comment	Response
Artley, Dick	My observations of so called fire reductions projects observed throughout the West is that most are nothing more than an excuse to log. The NFP is a Trojan Horse. Using fear of fire, and ignorance about fire ecology and what conditions support large blazes, logging proponents have so far been successful at duping the public, many politicians, and even some environmental organizations into supporting inappropriate logging proposals. I personally would feel a lot better about any logging proposal if the FS and other supporters just came out and said, the reason we are logging is to get some timber out of the woods. Then we could have an honest debate about whether this is really in the public interest. Instead, far too many timber sales are wrapped up in the flag of fuel reductions that are neither effective nor in appropriate locations. The Schoennagel et al. review just gives further credence to this perspective. The review can be found at www.pnas.org Burning Questions -- Why the National Fire Plan is a Trojan Horse for Logging by George Wuerthner Published by Counterpunch, June 12-14, 2009 http://www.counterpunch.org/wuerthner06122009.html	Economics item raised in this comment is addressed in the DEIS, Ch. 3.15, Economics.

Author(s)	Comment	Response
Artley, Dick	Opposing Views Attachment #3 contains 56 additional scholarly articles authored by Ph.D. scientists, fire experts and even 2 USFS employees describing how logging merchantable trees to reduce fire risk in the WUI must never be the only consideration. Comment: The goal as described in the P&N should not be fuels reduction. The P&N goal of this project should be to take action that will save human lives and homes before a wildfire occurs. Fuels reduction might be an alternative to achieve the goal of saving human live if and when a wildfire starts and is headed for the WUI.	Page 1-2 of the Como DEIS states the Purpose and Need as: The purpose of the Como Forest Health project is to: ♦ Reduce potential mountain pine beetle-caused mortality in large diameter ponderosa pine ♦ Reduce fuel loads and maintain historical fire return intervals in the project area ♦ Improve forest resilience to mountain pine beetle, Douglas-fir beetle, and dwarf mistletoe ♦ Maintain the visual integrity of the larger Lake Como Recreation Area
Artley, Dick	Request for changes to be made to the final NEPA document: Analyze a Dr. Cohen fine fuels removal fire damage risk reduction methods alternative in detail. Also, change the P&N to reflect the real (emphasis added) reason the USFS should be taking action near the WUI.	Dr. Cohen's fine fuels removals for fire damage risk reductions are recommendations that private landowners should consider when living in the wildland urban interface zones. Bitterroot RC&D helps state and private land owners shoulder that responsibility but ultimately it a decision a person must make. Every fire here on the Bitterroot motivates people to seek out grants and resource programs to reduce fuels on private lands but other issues related to roof composition, siding, that contribute to flammability of structures is solely determined by the land owner or influenced by homeowners associations or cost of insurance policies and fire education programs. The purpose of the Como Forest Health Project is to reduce the potential that wildfire would burn from National Forest

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		onto adjacent private lands. We delineate the WUI on our map as a way of showing the path of possible fire travel towards private lands should a wildfire start. Fuels reductions in this area would interfere with the path of future fires getting to private lands. The Bitter Root RC&D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. • $3,536,604 received in grant funds to the Bitter Root RC&D 3-county area. • $2.6 million in grant funds utilized to date. • $2.9 million in matching landowner contributions to date. • $462,000 in grant funds to support other RC& Ds in Montana. • Nearly 5,100 private land acres signed-up. • Nearly 4,200 of those acres have treatment completed. • 687 private landowners participating. • 602 landowners completed treatment plan.

Author(s)	Comment	Response
		• 445 project areas hired private contactors. http://bitterrootrcd.org/hazardousFuels.htm

Author(s)	Comment	Response
Artley, Dick	Comment: Even the USFS acknowledges that the public does not want their public lands logged. The following quote comes from a forest service publication that describes what the public wants from their national forests: "The public sees the restriction of mineral development and of timber harvest and grazing as being more important than the provision of natural resources to dependent communities (although this is still seen as somewhat important)." (Pg. 28) Source of quote: "Survey results of the American public's values, objectives, beliefs, and attitudes regarding forests and grasslands: A technical document supporting the 2000 USDA Forest Service RPA Assessment". Gen. Tech. Rep. RMRS-GTR-95. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 111 p. Link to Complete Report: http://www.fs.fed.us/rm/pubs/rmrs_gtr095.pdf[...]"Survey results of the American public's values, objectives, beliefs, and attitudes regarding forests and grasslands: A technical document supporting the 2000 USDA Forest Service RPA Assessment" Gen. Tech. Rep. RMRS-GTR-95? The survey concludes the public believes its more important to reduce timber harvest than it is to provide natural resources to dependant communities. Does this give you a clue about how the public feel about logging their public land? Are you logging anyway to spite the people who pay your salary?	The cited document reports the results of a public survey that were used to help develop the Forest Service Strategic Plan (2000 Revision). The quotation provided here is under the heading of Economic Development which deals with commodity development and commercial uses of public land. On a scale of 1to 5, with 1 being "not at all important" and 5 being "very important", the survey results indicated "provide natural resources to dependent communities" as 3.60 and "restrict timber harvest and grazing" as 3.99, which are of relatively similar importance. The survey also indicated there is wide support for the strategic goal of promoting ecosystem health and conservation using a collaborative approach to sustain the Nation's forests, grasslands, and watersheds (page 2). The Purpose of the Como Forest Health Project is consistent with the strategic plan objectives supporting this goal. See Chapter 1 of the DEIS.

Author(s)	Comment	Response
Artley, Dick	Request for changes to be made to the final NEPA document: Include a discussion and supporting data justifying why it's appropriate to log and road-up public land that the vast majority of the American public does not want to occur. The discussion should explain why the recommendations of over 500 Ph.D. scientists represented in Opposing Views Attachments #1 and #10 aren't applicable to the Como sale area.	Comment is addressed in the DEIS, Ch. 1. explanation of the Purpose and Need for Action.
Artley, Dick	, please post your responses to public comments online as well as maintaining a hardcopy in the Project File. Comment: Members of the public who submit comments on a draft NEPA document make the effort to read the NEPA document closely and take the time to compose comments that reflect their issues.[...]respond to these comments and allow the public to read your responses they don't know if their comments were read and "considered." Request for changes to be made to the final NEPA document: Post your meaningful, specific responses to the comments contained in this document online. Ranger Oliver, if you choose not to allow the public to read your responses to their comments online then consider this a FOIA for your responses. Assure that they are posted within a day or 2 of the date the final EA is released and the objection period begins. Consider this an official FOIA request. Your FOIA person will know what to do.	Responses to comments will be published as Chapter 4 of the Como FHP FEIS. That document will be available on the Bitterroot National Forest public website at fs.usda.gov/bitterroot. Changes between the Draft EIS and the Final EIS are summarized in the Record of Decision (ROD).

Author(s)	Comment	Response
Artley, Dick	Glyphosate is a toxic poison and must never be applied to public land where families recreate.[...]propose to apply this poison to vegetation growing on land owned by and used by 317 million Americans.[...]I understand that natural vegetation and the resources that depend on the health of the natural vegetation will be significantly harmed if the non-native invasive plants are not eradicated. I also know there are effective (although more costly) alternatives to killing these plants other than herbicides. If most Americans knew of the tragic results stemming from contact with some herbicides they would insist that the USFS spend the extra money on these safer alternatives. One again, it's critical that American tax dollars be spent on eradicating noxious weeds safely. It's criminal to risk causing the devastating health problems scientific research conclusions indicate are caused by glyphosate contact. Consider these comments including Opposing Views Attachment #9a as notification that you are covering up glyphosate health risks per section (a)(1) of 18 U.S.C. § 1001 quoted below, therefore you are aware of what you are about to do.	Treatment of noxious weeds in the Como FHP project area will comply with the Noxious Weed Treatment Project ROD (2003). The use of herbicides in the Como FHP Project was analyzed and approved in the Noxious Weed Treatment Project FEIS and ROD (2003). Applying a decision does not re-open it to litigation. Herbicide applicators and Forest Service personnel follow current EPA and OSHA safety regulations, and manufacturer label direction when they apply and supervise the application of herbicides. The Forest uses job hazard analyses to identify and mitigate risks to applicators and the environment in the implementation phase of chemical weed control.
Artley, Dick	please read your documents that verify glyphosate safety again that are listed below. You will notice they are out of date (11 years old), thus, they do not contain recent scientific research results clearly showing herbicides containing glyphosate are potentially lethal. You will notice that the References section of your 2003 Noxious Weed Treatment Project Record of Decision Riparian Weed Treatment pre-decisional EA does not contain any of the source documents	

Author(s)	Comment	Response
	for the research conclusions contained in Opposing Views Attachment #9a. Why do you propose to take such risks based on a document that selectively included source literature favorable to glyphosate application? Have you explored how the SERA research was funded? Was it Monsanto? Do the USDA invasive plant EISs rely on the SERA conclusions? Are you prepared to make an independent, fully-informed Decision using the Precautionary Principle wisdom? Please see below: "When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically." Source: http://www.sehn.org/ppfaqs.html[...] Attachment 9a contains statements by hundreds of well respected Ph.D. scientists who describe their research findings on the safety of herbicides containing glyphosate. Their research indicates glyphosate containing herbicides clearly kill fish at very small concentrations and are linked to the following health problems in mammals (including humans): • birth defects, • non-Hodgkin's lymphoma (a form of cancer), • mitochondrial damage, • cell asphyxia, • miscarriages, • attention deficit disorder, • endocrine disruption, • DNA damage, • skin tumors,	The Forest has kept up with recent research about glyphosate, particularly the issue involving the surfactant POEA and impacts to amphibians and aquatic organisms. As a result, the Bittterroot Forest invasive species program uses only the aquatic approved formulation of glyphosate in the rare and small area situations that may warrant the use of that chemical. The use of other herbicides in the Como FHP Project was analyzed and approved in the Noxious Weed Treatment Project FEIS and ROD (2003). Applying a decision does not re-open it to litigation. Herbicide applicators and Forest Service personnel follow current EPA and OSHA safety regulations, and manufacturer label direction when they apply and supervise the application of herbicides. The Forest uses job hazard analyses to identify and mitigate risks to applicators and the environment in the implementation phase of chemical invasive weed control.

Author(s)	Comment	Response
	• thyroid damage, • hairy cell leukemia (another cancer), • Parkinson disease, • premature births, • decrease in the sperm count, • harm to the immune system in fish • death of liver cells, • severe reproductive system disruptions • and chromosomal damage.	
Artley, Dick	even casual exposure to herbicides that contain glyphosate is shown in the lab to cause cancer in mammals.	
		Treatment of noxious weeds in the Como FHP project area will comply with the Noxious Weed Treatment Project ROD (2003). The use of herbicides in the Como FHP Project was analyzed and approved in the Noxious Weed Treatment Project FEIS and ROD (2003). Applying a decision does not re-open it to litigation. Herbicide applicators and Forest Service personnel follow current EPA and OSHA safety regulations, and manufacturer label direction when they apply and supervise the application of herbicides. The Forest uses job hazard analyses to identify and mitigate risks to applicators and the environment in the implementation phase of chemical invasive weed control.

Author(s)	Comment	Response
Artley, Dick	Comment: If you think it's inappropriate to use chemicals banned for use in other countries in your yard when children play, then why do you propose applying the poison glyphosate to public land? Please respond. This is not a rhetorical question.	The Forest has kept up with recent research about glyphosate, particularly the issue involving the surfactant POEA and impacts to amphibians and aquatic organisms. As a result, the Bittterroot Forest invasive species program uses only the aquatic approved formulation of glyphosate in the rare and small area situations that may warrant the use of that chemical. The use of other herbicides in the Como FHP Project was analyzed and approved in the Noxious Weed Treatment Project FEIS and ROD (2003). Applying a decision does not re-open it to litigation. Herbicide applicators and Forest Service personnel follow current EPA and OSHA safety regulations, and manufacturer label direction when they apply and supervise the application of herbicides. The Forest uses job hazard analyses to identify and mitigate risks to applicators and the environment in the implementation phase of chemical invasive weed control.
Artley, Dick	you cite your outdated 2003 Noxious Weed Treatment Project Record of Decision as the basis for your conclusion that herbicides containing glyphosate are safe if used according to label directions.	Comment is addressed in Response to Comment #9-73 above
Artley, Dick	the evidence overwhelmingly indicates some glyphosate herhicides are potent carcinogens? There are thousands of sites on the WEB that clearly indicate glyphosate is potentially lethal. Incredibly, you depend on a single document endorsed by the USDA declaring that glyphosate is safe.	Comment is addressed in Response to Comment 9-73 above.
Artley, Dick	Please make hardcopies of this section of these comments and Opposing Views Attachment #9a and give them to the people who will be applying the herbicides that contain glyphosate. Also, mail them to the worker's family	Herbicide applicators working on the Bitterroot Forest receive regular annual re-certification and safety training that includes updates on research findings and mitigation measures.

Author(s)	Comment	Response
Artley, Dick	There are alternatives to herbicides. Spend a little more money using mechanical and/or biological control.	Treatment of noxious weeds in the Como FHP project area will comply with the Noxious Weed Treatment Project ROD (2003). The Noxious Weed Treatment Project ROD (2003) provides criteria and conditions for the different methods of noxious weed control. Mechanical and biological control methods are used when conditions are such that the treatments will be effective (pages ROD-4, 21-22).
Artley, Dick	The report points out not all glyphosate formulations are the same. Table 2: Glyphosate Formulations Identified by the Forest Service (pages 281 and 282) identifies 53 different herbicide formulations containing glyphosate. Table 5: Classification of formulations (page 287) shows the toxicity of the different formulations presented by toxicity levels and confidence.[...] Unfortunately,[...]you indicate glyphosate will be applied without describing the specific formulation that will be applied. According to SERA there are 11 formulations of glyphosate-containing herbicides that are "low toxicity."	Comment on glyphosate is addressed in the Response to Comment #9-73 above. The Forest continues to implement an IWM (integrated weed management) strategy that includes all available options such as biocontrol, cultural practices, prevention measures, education and mechanical methods as described in the 2003 Bitterroot Forest Noxious Weed EIS/ROD.

Author(s)	Comment	Response
Artley, Dick	Request for changes to be made to the final NEPA document: Please indicate you will apply one of the 11 glyphosate formulations that (according to SERA) are low toxicity and indicate the formulation that will be applied and name the formulation(s). Also, use biological and mechanical control.	Comment is addressed in Response to Comment #9-78 above
Artley, Dick	The pre-decisional EA does not consider direct, indirect and cumulative effects to and from climate change.	Climate change is addressed in the DEIS, Chapter 3.1, Silviculture and Forest Management Section with a summary subsection on p. 3-55. The Final EIS has a separate chapter addressing the issue of climate change.
Artley, Dick	It is widely recognized that timber harvest contributes to global carbon emissions and that climate change has significant ramifications for forests and biodiversity.	Climate change and carbon emissions are addressed in the Draft EIS, Chapter 3.1, Silviculture and Forest Management, including pp. 3-55 and 3-56. The Final EIS dedicates a separate chapter to the topic of climate change.

Author(s)	Comment	Response
Artley, Dick	Comment: The Bitterroot National Forest's approach to climate change fails to take a "hard look" at carbon storage and climate change impacts on ecosystem services. Simply mentioning "climate change" here and there in a NEPA document does not constitute an analysis.[...] Request for changes to be made to the final NEPA document: Please include a discussion of climate change in the final NEPA document showing: 1) how the Como timber sale will affect climate change, and 2) how climate change will affect the resources analyzed in Chapter 3.	The Final EIS does include a separate chapter that focuses on the topic of climate change.
Artley, Dick	were really concerned about aquatic species' health you would indicate in the final EIS that all newly constructed temporary roads will be obliterated after use and apply the obliteration method that returns the ground to the natural angle of repose and eliminates the running surface. Not doing so clearly indicates you have no intent of using the road temporarily.	Please see Table 2.2-5, Design Features for the Como Forest Health Project, for the project's treatment of temporary roads (pages 2-15 and 2-17). (Soil disturbances associated with landings, roadside ditches, temporary roads, or other areas would be rehabilitated as soon as possible using treatments such as re-contouring, seeding, fertilizing, and covering with slash.) Also please see Table 2.2-5 for direction that limits temporary roads to upland locations outside of Riparian Habitat Conservation Areas (RHCAs), minimizing sediment potential (page 2-17).

Author(s)	Comment	Response
Artley, Dick	If the final EIS does not clearly indicate that your proposed temporary roads will be obliterated such that a running surface no longer exists, it will show you plan to allow these temporary roads to pump sediment for decades until the so-called temporary road is used again for the next timber sale.	Please see Table 2.2-5, Design Features for the Como Forest Health Project, for the project's treatment of temporary roads (pages 2-15 and 2-17). (Soil disturbances associated with landings, roadside ditches, temporary roads, or other areas would be rehabilitated as soon as possible using treatments such as re-contouring, seeding, fertilizing, and covering with slash.) Also please see Table 2.2-5 for direction that limits temporary roads to upland locations outside of Riparian Habitat Conservation Areas (RHCAs), minimizing sediment potential (page 2-17).
Artley, Dick	Comment: Since temporary roads are outsloped with no ditch, sediment that is generated during precipitation events, finds its way to streams and harms the aquatic resources for decades after initial construction … unless the road is obliterated. No other post-use treatment method (including re-contouring, seeding, fertilizing, and covering with slash) is as effective at eliminating damage to aquatic resources and subsurface water flow as obliteration.	Please see Table 2.2-5, Design Features for the Como Forest Health Project, for the project's treatment of temporary roads (pages 2-15 and 2-17). (Soil disturbances associated with landings, roadside ditches, temporary roads, or other areas would be rehabilitated as soon as possible using treatments such as re-contouring, seeding, fertilizing, and covering with slash.) Also please see Table 2.2-5 for direction that limits temporary roads to upland locations outside of Riparian Habitat Conservation Areas (RHCAs), minimizing sediment potential (page 2-17).
Artley, Dick	After the temp roads are obliterated or decommissioned they must be monitored over time to assure they are not generating sediment. This DEIS contains no such monitoring plan.	The Final EIS contains a monitoring plan that tracks key resource conditions over time.

Author(s)	Comment	Response
Artley, Dick	Request for changes to be made to the final NEPA document: Indicate all temporary roads will be obliterated after use making sure to define road obliteration using the statement below (or something similar) to eliminate confusion: When roads are obliterated the road running surface is completely eliminated from the landscape. Full recontouring is accomplished by recovering all available fill and placing it back in the cutbank until the surrounding terrain is fully matched. Also, assure the final NEPA document describes the road obliteration monitoring plan to assure the sediment is being reduced as expected, and indicate the Bitterroot National Forest will budget funding for the monitoring.	See Section 3.6 Soils. Detrimental Soil disturbance from temporary road, track-line machine trail, and excavated skid trail construction is considered detrimental for the purpose of DSD calculations in this document. Disturbances from these construction activities are considered DSD even after rehabilitation activities however the detrimental effects will slowly be reduced over time through natural recovery. The detrimental soil conditions from temporary roads may reduce soil productivity for several years until vegetation, organic matter, and hydrologic function is restored. Table 3.6-6 displays the miles of temporary road construction and acres of associated. All temporary roads, track-line machine trails, and excavated skid trails would be rehabilitated as part of the timber sale or stewardship contract. Rehabilitation activities would include recontouring, slashing, fertilizing, and seeding to restore soil productivity to the extent possible. Recontouring speeds the process of vegetation and hydrologic recovery, which alleviate detrimental conditions over time. By completing the rehabilitation activities, the detrimental soil conditions are not anticipated to persist nor are they considered a permanent loss in soil productivity. Project File document WATER-010 documents a high level of decommissioning treatment effectiveness. Due to consistent success in rehabilitation treatments, no monitoring or reporting is proposed other than a field visit the first growing season after treatment to validate grass establishment.

Author(s)	Comment	Response
Artley, Dick	please respond to the opposing views contained in the Opposing Views Attachments to these comments.[...] Each responsible opposing viewpoint contained in the attachments to these comments is different and is related to a unique subject, therefore a single response attempting to deal with all opposing views simultaneously does not respond to opposing views as required by law. Comment: Simply placing a hardcopy of the Responsible Official's opposing views responses in the project file located at the district hides the information from the American public. How will the judge react when he/she finds out you expected the public to fly thousands of miles to examine a document that legally must be available to the public?	Interdisciplinary Team specialists reviewed and considered the Opposing View Attachments and the Attachments were incorporated into the Project File.
Artley, Dick	Request for changes to be made to the final NEPA document: Include an electronic response to each opposing view contained in the Opposing Views Attachments and post these responses online for the public to examine.	The complete set of Responses to Comments will be available online at the Bitterroot Forest website: fs.usda.gov/bitterroot as well as in Chapter 4 of the Final EIS.

Author(s)	Comment	Response
Artley, Dick	Comment: The Como timber sale will cause major damage to amenity natural resources. This plunder and irreversible damage is described by over 400 scientists in the Opposing Viewpoint Attachments. Forging ahead with the timber sale with full knowledge of the likely resource damage that the sale will cause indicates 1) weighing the relative value of the natural resources in the area against timber outputs has not been done, and 2) they have not been harmoniously coordinated. Also, since outdoor recreation, watershed, wildlife and fish are adversely affected by the sale, you obviously consider timber more important that these 4 other resources.	A full evaluation of environmental consequences of the alternatives is contained in Chapter 3 of the DEIS and Chapter 3 of the FEIS.
Artley, Dick	Request for changes to be made to the final NEPA document: Include the source literature for particularly relevant science quotes contained in the Opposing Viewpoint Attachments in the References section of the final EIS and cite the quotes contained in the attachments in the body of the final EIS. Indeed, it makes sense for a public servant to present the public with the whole story which includes benefits and drawbacks of project implementation.	Source literature used in the analysis is found in the DEIS, Appendix C, Literature Cited and specific citations throughout chapters of the DEIS.

Author(s)	Comment	Response
Artley, Dick	Comment: How will the Responsible Official justify ignoring the statements of 221 unbiased, highly educated biological scientists who point out the natural resource degradation resulting from commercial timber sales? Why does the Responsible Official follow the advice of a handful of foresters and silviculturists whose job and salary depends on selling timber, and simultaneously reject the wisdom of 221 unbiased, independent scientists. -Opposing Views Attachment 1.doc, pg. 49-	The analysis contained in the DEIS addresses all the substantive issues raised during internal agency and external public scoping as completed by a broad range of natural resource specialists on the ID Team (see DEIS, Appendix E, List of Preparers). The analysis of the project adheres to the direction contained in the National Environmental Protection Act and other relevant regulations and policy.
Artley, Dick	Of course the Responsible Official will stop at nothing trying to disprove and ridicule the authors and source documents. How? The Responsible Official will claim they are: not peer reviewed, "gray" literature, trade journals, subscriptions published by industrial/environmental organizations, newspapers, magazines, and internet blogs, and just opinions -Opposing Views Attachment 9a.doc, pg. 81-	

Author(s)	Comment	Response
Artley, Dick	None of the sources for the opposing views is specific to this project. Information contained in books and/or scientific prediction literature are not specific to individual projects. They describe cause and effects relationships that exist when certain criteria are met. Indeed, the literature in the References section of the draft NEPA document is not specific to the project yet its used to help design this project. The opposing views presented below are not always right or wrong. When responding to opposing views that the Responsible Official believes are "reasonable" please discuss them in the context of this project. Once again, this gives the public complete project understanding -Opposing Views Attachment 4.doc, pg.1-	The DEIS, Chapter 3 narratives on Affected Environment describe site specific existing conditions within the project area. The natural resource specialists on the ID Team use site specific project existing condition data (catalogued in the Project File) along with their extensive training, experience and relevant scientific literature to reach their objective conclusions described in the Environmental Consequences sections of the DEIS, Chapter 3.
Artley, Dick	who are financially motivated to produce volume should trump the best science I have presented is folly[...]Believing that the recommendations of	The Bitterroot National Forest Plan requires managers to "Provide sawtimber and other wood products to help sustain a viable local economy" (BNF Plan page II-3). Professional foresters and other individuals are hired specifically to provide duties in support of the forest's timber program. Therefor it is not inaccurate to state that these employees are paid to produce timber volume.

Author(s)	Comment	Response
Artley, Dick	The USFS deals with Objections filed by groups or individuals who might litigate legally because the statistics show when appeal and objection decisions are taken to court, the judge rules in favor of the plaintiff in the majority of cases.	The Comment is personal opinion.
Artley, Dick	This project would benefit the American public if … and only if every treatment in the Proposed Action except logging, road construction/reconstruction and herbicide application is implemented. The recreating public will only be served when another EA with a different Proposed Action is prepared by a responsible IDT and distributed for another comment period.	The Comment is personal opinion.

Author(s)	Comment	Response
Artley, Dick	A few examples of the many legal violations that are found throughout the DEIS can be seen on Table 2.4-1 on pages 2-22 and 2-23 in the following link to Chapter 2:[...]I challenge you to examine this Table and determine: · how many acres will be logged … you have your choice of 4 numbers, · how many miles of road will be constructed. You again have your choice. Apparently, Ranger Oliver doesn't believe temporary roads are roads. · how one operates an 80,000 pound skyline yarder on a 2.6 mile-long "trail"	Row 5 of Table 2.4-1 in the DEIS shows the quantity of "...Commercial Harvest (acres)" for each of the four alternatives. Further down in the same table there are rows showing the amount of "Road Construction (mile)" and "Temporary Roads (mile)", for each alternative. A tracked-line machine trail is referred to as a trail beause it is not constructed to the standard of a road. In the case of a timber haul road the design vehicle is a logging truck, therefore the road must be constructed to a specification that will accomodate a logging truck. Such specification usually includes maximum gradient, minimum turn radius, and minimum road width. This means that a logging road is relatively limited in where it may be located and what it may access. In the case of the tracked-line machine trail, the design vehicle is an off-road skyline yarder. This type of yarder is typically lighter and more maneuverable than a traditional skyline yarder. Trails may be designed at a steeper gradient than a road which often means the trail is much shorter than a logging road to access the same location .

Author(s)	Comment	Response
Artley, Dick	2) Place signs (with timber sale maps) at strategic locations around Lake Como (the boat launch, the 4 developed campgrounds and scenic vista pullouts) explaining how far logging and road construction will be from that location. At the bottom of each sign disclose the names of Montana Congressional delegation and inform the public that they all have aides who specialize in helping them with uncooperative Federal Agencies.	The public will be informed about activities associated with the project via news releases, signs placed at appropriate locations in and around the project area, various social media websites, and through communicating with the public in the field.
Clarkson, Pete	I fully support the Como Forest Health Project.	Comment will be taken into consideration by the Deciding Official.
Clarkson, Pete	I would like to see the habitat proposals in this alternative implemented, therefore I am in favor of leaving most of the south west portion of the Project (Area E) untreated. I am familiar with this area and there is a lot of beetle kill. I reviewed chapter 3.2 Fire and Fuels and understand the concern for crowning fire in that portion of the Project. I feel I have a good understanding of the benefits and necessity of fire in maintaining a healthy forest and that the fire treatments in that Area would attempt to create mosaic patterns similar to natural bums. That being said, I am concerned about treating Areas C and E in Alternatives 2 and 3 with fire.	Adherence to stand level silvicultural prescription(s) by a certified silviculturist that identifies prescribed fire objectives in coordination with the fuels specialist (post thinning - commercial/non-commercial, site prep, etc) that are achievable for prescribed fire implementation for each unit treated. Generally the fuels specialist and the silviculturist will conduct walk through of units of concern to make sure fire objectives are and can be met and make recommendations for additional treatment if needed. Severity during burn implementation is monitored using burn documentation forms found in the prescribed burn plan and documented as well as direction received from the prescribed burn boss who monitors site conditions and coordinates with the firing boss to adjust firing patterns to ensure fire objectives are being met (severity).

Author(s)	Comment	Response
Clarkson, Pete	This is tough country and not only is there a significant amount of standing dead timber but in the area of the 1988 fire there is plenty of fuel on the ground as well. Since Area C is to be treated in Alternative 4 this will give an indication of the feasibility of fire treatment. Also if a fire treatment gets away in Area C it most likely will burn less acreage. At this point I think it is worth the risk leaving Area E untreated.	Thank you for your comment. Alternative 4 addresses your point
Clarkson, Pete	I particularly like the aspen treatment plan in alternative 4. I recently became aware how important aspen stands are for mule deer. These treatments most likely will have a number of diverse benefits over time.	Thank you for your support of the aspen treatments. Aspen stands are extremely important to a wide variety of wildilfe species including ungulates, cavity-nesting birds, and small forest mammals.
Clarkson, Pete	What I like about alternative 4 is allowing the current habitat to stay intact in the higher elevations with the logging and fire treatments in the lower elevations. This should have the desired effect of fuel reduction and slowing down the beetle kill.	Alternative 4 emphasis and description is on p 2-5, 2-9, 2-11, 2-23 through 2-27 of the DEIS with the retention of scenery and emphasis of big-game winter range , forage and cover show the tradeoffs of treatment. Fuels reduction will be improved in the actively treated areas and to some degree the beetle activity may slow but untreated areas that remain will be at risk for future activity of die off over time as in Alternative 1 - No Action.

Author(s)	Comment	Response
Clarkson, Pete	In regards to Como Forest Health Plan DEIS Chapter 3.3 Wildlife in the section on elk; I felt the discussion about winter range was outdated. The discussion references the Guide to Elk Habitat Objectives of 1978 and the Bitterroot Forest Plan of 1987. It is my understanding the current thinking is that summer range is the most critical to elk nutrition, overall health and reproduction. For instance if a cow elk has less than 6% body fat she will not come into heat. The cow goes into the winter months essentially carrying her food supply on her back in the form of fat.	You are correct in your understanding about the critical importance of summer range to elk nutrition and overall success. However, there is no summer range within the Como Forest Health project area. Elk summer range in Montana is defined as higher-elevation forests dominated by Douglas-fir, lodgepole pine, Engelmann spruce, and subalpine fir surrounding open parks. Winter range is made of low-elevaton grasslands and forested stands of ponderosa pine and quaking aspen. Eighty-five percent of the project is considered winter range. You are also correct in your statement that the documents that are referenced (the Guide to Elk Habitat Objectives and the Bitterroot Forest Plan) are out of date. Unfortunately, these are our guiding documents that we are required to follow until the Bitterroot National Forest develops and analyzes a new forest plan. However, in an attempt to provide the diversity of habitat components needed for elk habitat within the project area, the IDT developed Alternative 4. This alternative focuses on thermal and hiding cover recruitment, so that there are security areas for elk, deer and other wildlife in the project area in the future. In addition to summer range, recent research has shown that security areas are important for over all elk fitness and survival.
Clarkson, Pete	As stated above I am in favor of the Project. I like the way it is designed with the various treatments in Alternatives 2, 3 and 4. I have walked through the recently logged areas within the Project boundaries and appreciate the way the work was done. From my observations in the Coyote Coulee trail system in the Lost Horse area logging has made a difference in reducing beetle kill.	Thank you for your supporting comments.

Author(s)	Comment	Response
Clarkson, Pete	Additionally, the economic boost from this Project would be welcomed in the county.	The differences between alternatives in jobs associated with the Como Forest Health project are described in the DEIS on page 3-473. Direct jobs associated with the project range from 42 in Alternative 2 to 37 in Alternative 4. Total jobs range from 82 jobs in Alternative 2 to 72 jobs in Alternative 4. These are not new jobs but jobs attributed to the project.
Clarkson, Pete	Doing nothing as in Alternative 1 seems like the worst approach	Comment will be taken into consideration by the Deciding Official.
Clarkson, Pete	I have no experience with prescribed burning and maybe these areas can be burned safely, but I question the wisdom of starting fires there	The sequencing of this burning unit would take place after the logging around this unit would be completed - in addition to any fireline fuelbreak(s) work that would be needed prior to ignition. We usually treat adjacent stands (Units 49 and 51) with prescribed fire (as indicated by Silvicultural prescription) post logging to providee anchor points for additional burning in that area. On p. 3-76, Figure 3.2-2: Fire History and Ignitions in Como Forest Health Analysis Area, there is a fair amount of lightning-caused ignitions on the Rock Creek Ridge. This situation coupled with mountain pine beetle-caused tree mortality creates an opportunity for regeneration under a prescribed burning scenario rather than waiting for a wildfire similar to the 1988 Rock Creek fire, which was stand replacement. A stand replacement fire will regenerate the stand at some point in the future due to the type of fire regime for that fuel type (See Figure 3.2-3 Potential Fire Behavior Alternative 1 - No Action)
Clarkson, Pete	I feel Alternative 4 is the best alternative	Comment will be taken into consideration by the Deciding Official.

Author(s)	Comment	Response
Foss, Suzy	First and foremost is the recognition that the Lake Como Recreation Area and the forest lands between the recreation area and the WUI are severely impacted by bug kill and over growth of vegetation thus creating a dangerous fire situation for both the USFS and the County of Ravalli.[...]The toll on our watersheds, recreational opportunities, loss of wildlife not just while fire is burning but do to loss of habitat, food supply, shelter from heat and cold plus the stress of both the fire activity and the methods needed to fight the fire itself all impacts the stress load on the wildlife and reproduction success.	On page 3-26 under the Silviculture and Forest Management there is information on mountain pine beetle around the Lake Como Area: Mountain pine beetle appears to be at similar levels or increasing at Como Lake in 2013. In 2013, both ground surveys and Aerial Detection Surveys show that mountain pine beetle is still very active near Como Lake and killing approximately 4-5 TPA and small groups of 5 to 40 trees in both LPP and ponderosa pine. Also, pockets of trees killed by mountain pine beetle in 2012 can still be found in some stands in both drainages. Currently, mountain pine beetle is primarily attacking small and mid-size trees. In most of the small ponderosa pine trees examined (greater than 5 inches), we did not final any viable brood. We did find 3rd and 4th instar larvae in the mid-size trees (11 to 18 inch DBH) we examined during our site visit. Very little to no brood is produced when smaller trees are attacked thus they create a population sink and may indicate population decline. On page 3-80 Figure 3.2-3 shows Potential Fire Behavior under existing conditions under Alternative 1 - No Action.
Foss, Suzy		There is an ambiguous link between hospital admissions for respiratory and circulatory diseases and smoke exposure (Sharkey 2001). However, the health effects of high levels of particulates in the air are recognized and monitored by the Montana Department of Environmental Quality. The Montana Department of Environmental Quality established and monitors air quality at 19 sites across the State, one of which is in Hamilton, MT. The monitoring sites collect data on six pollutants and two sizes of particulate matter. The Montana Department of Environmental Quality

Author(s)	Comment	Response
	The impact upon the health, safety and general welfare of county citizens along with the negative long term economic negative impacts has been and continues to be of prime concern to local government.[...] Our medical practitioners have seen a steadily rising case load of respiratory illness especially in children and seniors due to the smoke that settles in our valley due directly to wild land fire.[...]The resulting economic impact of wild land firefighting is no secret and the only way to have a positive impact toward reversing this every growing expense to our tax payers is to fight fire by cleaning up the forests.	issue public health advisories based on established breakpoints and associated visibility for particulate concentrations that may affect public health. The alerts provide recommendations for limiting exposures (see below) to air pollutants. (http://www.deq.mt.gov/FireUpdates/SmokeCategories.mcpx) Health Effects CategoriesAir Quality Index (AQI) for BAM-2.5 24-Hour 1Health Effects Categories Health Effects Cautionary StatementsHazardous Serious aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly serious risk of respiratory effects in the general population.Everyone should avoid any outdoor exertion people with respiratory or heart disease, the elderly, and children should remain indoors.Very Unhealthy Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly significant risk of respiratory effects in the general population.People with respiratory or heart disease, the elderly, and children should avoid any outdoor activity everyone else should avoid prolonged exertion.Unhealthy Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly increased respiratory effects in the general population. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion everyone else should limit prolonged exertion.Unhealthy for Sensitive Groups Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly.People with respiratory or heart disease, the elderly and children should limit prolonged exertion.Moderate Possibility of aggravation of heart or lung disease among

Author(s)	Comment	Response
		persons with cardiopulmonary disease and the elderly.None 1 Guideline For Reporting Of Daily Air Quality – Air Quality Index (AQI), EPA-454/R-99-010, July 1999, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711. The economic analysis in the Como Forest Health DEIS (pg 3-471 to 3-473) shows the costs of logging, the costs of activities associated with logging, and prescribed fire for each alternative. The costs of fire suppression between 2008 and 2013 are provided below for comparison. Generally, the costs of fuels treatment and prescribed fire are lower than the costs of fire suppression. Costs of fire suppression on the Bitterroot National Forest FY Total $ 2008 906,712 2009 1,555,017 2010 6,098,568 2011

Author(s)	Comment	Response
		6,309,028 2012 13,143,667 2013 13,122,256 Report Run 02/25/2014 (Tracking Summary by Budget Line Item for WFSU - Fire Suppression)
Foss, Suzy	Another positive to his alternative is the job opportunity of the project for both commercial and non-commercial thinning. When we have mills in Montana cutting back on employees not due to lack of orders but lack of material at a time when our forests are dying from overgrowth it is a clear indication that this alternative is the correct one.	The differences between alternatives in jobs associated with the Como Forest Health project are described in the DEIS on page 3-473. Direct jobs associated with the project range from 42 in Alternative 2 to 37 in Alternative 4. Total jobs range from 82 jobs in Alternative 2 to 72 jobs in Alternative 4. These are not new jobs but jobs attributed to the project.
Foss, Suzy	I believe that any and all ecological impacts and issues have been so well identified, due to the non- stop litigation over the past 30 years or more, that at this point it is time for the USFS to step up and acknowledge that the reason we are in the shape we are in is directly attributable to that litigation and has not basis for additional environmental review.	Only four timber sales have been litigated in the last 31 years though there have been about 19 litigation cases on the Bitterroot National Forest.
Foss, Suzy		How Does Smoke Affect Livestock? The effects of smoke are similar for humans and livestock: irritation of

Author(s)	Comment	Response
	Ravalli County we have experienced several fire seasons extending into the breeding season of our ungulate populations. My family, as local cattle ranchers and horse breeders, have experienced economic loss due to stressed animals in the early to mid-gestation period. The heavy smoke in our south valley has slowed the growth of much needed pasture grass and hay production	the eyes and respiratory tract, aggravation of chronic lung diseases, and reduced lung function. High concentrations of particulate can cause persistent cough, increased nasal discharge, wheezing and increased physical effort in breathing. Particulate can also alter the immune system and reduce the ability of the lungs to remove foreign materials, such as pollen and bacteria, to which livestock are normally exposed. They do make some recommendations for livestock and wildfire smoke such as 1) limit exercise when smoke is visible 2) provide plenty of fresh water located near feeding areas 3) limit dust exposure by feeding low or dust free feeds and sprinkling or misting the livestock holding area 4) If livestock is coughing or having difficulty breathing, contact a livestock veterinarian 5) If livestock continues to experience primary or secondary problems with smoke-induced respiratory injury, you should contact a livestock veteriarian. These general rules also apply most ungulates. As quoted by "Wildfires, Smoke and Livestock" John Madigan, David Wilson, and Carolyn Stull School of Veterinary Medicine, University of California, Davis A research article called "Physiological Effects of Smoke Exposure on Deciduous and Conifer Tree Species" states that nearly all of the studies that examine the effects of smoke on plant physiology and development have been tied to seed germination. Relatively is known about how smoke influences primary and secondary metabolism in plants. A better understanding of the responses of plants to smoke is becoming increasingly more relevant as longer growing seasons and increased drought frequency and duration projected under future climate scenarios are expected to result in an increase of wildfires. The Montana Department of Environmental Quality monitors air quality monitoring sites and along with public health issues advisories based on established breakpoints and associated visibility for particulate concentrations that may affect public health. Once those alerts are issued there are recommendations made air quality index: http://www.deq.mt.gov/FireUpdates/SmokeCategories.mcpx

Author(s)	Comment	Response
		Health Effects CategoriesAir Quality Index (AQI) for BAM-2.5 24-Hour 1Health Effects Categories Health Effects Cautionary StatementsHazardous Serious aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly serious risk of respiratory effects in the general population.Everyone should avoid any outdoor exertion people with respiratory or heart disease, the elderly, and children should remain indoors.Very Unhealthy Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly significant risk of respiratory effects in the general population.People with respiratory or heart disease, the elderly, and children should avoid any outdoor activity everyone else should avoid prolonged exertion.Unhealthy Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly increased respiratory effects in the general population. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion everyone else should limit prolonged exertion.Unhealthy for Sensitive Groups Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly.People with respiratory or heart disease, the elderly and children should limit prolonged exertion.Moderate Possibility of aggravation of heart or lung disease among persons with cardiopulmonary disease and the elderly.None 1 Guideline For Reporting Of Daily Air Quality – Air Quality Index (AQI), EPA-454/R-99-010, July 1999, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

Author(s)	Comment	Response
Foss, Suzy	I am writing is support of Alternative 2 for the following reasons.	Comment will be taken into consideration by the Deciding Official.
Juel, Jeff	As part of the Bitterroot Quiet Use Coalition, Wildlands CPR (now WildEarth Guardians) submitted scoping comments for the Bitterroot Travel Plan with our February 29th, 2008 comment letter . Nearly 7 years later, we await Bitterroot National Forest action on this Travel Plan, to fulfill its responsibilities and legal mandates to create an ecologically sustainable transportation system that is enforceable, maintainable and minimizes conflicts among the various multiple-uses on the Bitterroot National Forest.	Thank you for your comment.

Author(s)	Comment	Response
Juel, Jeff	Subpart A requires the Forest Service to "identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands." [36 CFR 212.5(b)(1).] The Bitterroot Forest Plan contains an Objective to "Minimize the extent of the road system needed for resource management." The DEIS does not demonstrate how it is minimizing the road system in compliance with the Forest Plan or the Travel Management Regulations and their related FSM and FSH Directives.[...] Within these comments, we incorporate our August 29, 2014 letter to you, concerning travel analysis (36 CFR § 212 Subpart A) to identify "an appropriately sized and environmentally sustainable road system that is responsive to ecological, economic, and social concerns." (Deputy Chief Leslie Weldon March 29, 2012 memo.)	A transportation analysis was prepared for the Como FHP project and is part of the project file. This report identifies the minimum transportation system required to meet manage land within the project area. Minimization does not mean that no new roads can be built. The proposed road construction in this project is to access land that currently is not accessible with the current National Forest System of Roads. In referencet to the road construction in unit 50, we are constructing a road in a new location that minimizes impacts to water resources, and decommissioning the current access road due to its proximity to a wetland. The road construction proposed to accesses untis 32 and 34 is proposed due to the lack of access to those lands. Road construction to access to unit 41 is dependent upon side slope limitations. The initial intent was to extend road 62941, but sidelsopes on the north facing slope were prohibitive for road construction. The proposed location of the new road to unit 41 is related to sideslope. There currently is not access to that portion of land, and it cannot be managed with the current road system. If you look farther into the Forest Plan objectives that you note, you will also see the objective to construct an additional 250 miles of road by the first decade, and an additional 1015 miles by the end of the fifth decade. This project will also deocmmission more miles of existing road prism (National Forest System and Undetermined) than it will construct. The resulting road system is what is required to manage the National Forest System Land within this project area.
Juel, Jeff	The DEIS also fails to demonstrate consistency with Travel Management Regulations subparts B and C and their related Directives.	Comment is addressed in Response to Comment #18-3.

Author(s)	Comment	Response
Juel, Jeff	The process the Forest Service used is not consistent with requirements to involve the public in a science-based Travel Analysis Process, create a Travel Analysis Report, and identify roads likely not needed to manage the forest, as required under the Regulations and in the Directives.	A Travel Analysis has been completed for the project area and wil be inlcuded in the project file.
Juel, Jeff	The DEIS does not disclose the Project Area Road Management Objectives, which would be developed using the Travel Management Regulations	
Juel, Jeff	Table 3.11-3 of the DEIS shows that implementation of the Como Forest Health Project would change "Current Travel Management" by actions that include constructing new roads and adding "undetermined" roads to the Forest System. In the absence of compliance with Travel Management Regulations, we believe that altering road management in ways that create additional environmental impacts and further strain agency road maintenance budgets is unwise and probably illegal.	A Transportation Analysis was completed for this project and is part of the project file. Only roads were analyzed, there were no system trails within the project area. Roads that are in the undetermined status need to be analyzed to determined theirenvironmental impacts and future need for forest land management. All of the undetermined road identified in the project area was used at one time or another for timber extraction. All miles of road prism, Undtermined, or National Forest Sytem exist on the ground currently. Of the 7.16 miles of Undetermined road, 6.54 are affectivley closed yearlong to motorized, mainly due to their location behing existing closures, or phyiscal barriers at thier entrances. Of these miles, 3.70 miles will be added to the system, and 3.47 miles will be decommissioned. The roads in the Como FHP project area were built in the 1950's through the late 1970's. These roads mainly contour across the landscape, with few execptions, have gentle grades and have not been a maintenace burden, often times being maintained upon each entrace of forest management. The system of roads proposed is what is needed to manage National Forest System Lands within the project area.

Author(s)	Comment	Response
Juel, Jeff	Executive Order 11644 as amended by E.O. 11989 provides the foundation for travel management and states that route designation procedures "will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands." In accomplishing this broad goal, the Executive Orders specifically require that the designation of motorized areas and trails shall be in accordance with the following: 1) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, or other resources of the public lands. 2) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. 3) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.[...] The DEIS does not demonstrate consistency with those Executive Orders.	There are no designations of motorized areas and trails in this project. Chapter 3.5.4 Environmental Consequences in the DEIS discloses that the vegetation will be more open alongside roads which may result in the potential for off-road travel. The project area will be monitored following project completion and areas will be blocked off as needed for resource protection.

Author(s)	Comment	Response
Juel, Jeff	The cumulative effects of off-road vehicles was not adequately considered in the DEIS. Although the action alternatives would close an unspecified length of user-created routes, the DEIS does not disclose the full extent of off-road motorized travel in the Project Area. It is well-known that off-road enthusiasts who don't respect travel regulations often use features such as skid trails, temporary roads, and tracked line-machine trails that become available as a result of timber sales. The DEIS does not evaluate the risk of increasing such illegal use in the future.	Illegal access around off of Forest Service Roads is a common problem on National Forest Lands. Law Enforment Officers and the Bitterroot National Forest OHV Ranger montitor these areas of concern.
Juel, Jeff	Forest Plan road standards include "Road maintenance operations and practices shall be conducted to protect the road investment, minimize loss of material from the roadway, and minimize erosion." Forest Plan road density standards include: "As a general guide, average road densities in 3rd order and larger drainages should not exceed the densities by land type and visual quality objective displayed in Table 11-8." The DEIS does not demonstrate consistency with those forest plan standards.	The scenery analysis for Lake Como FHP identified that Alternative 2 and 3 would deviate from Forest Plan standards and would require an amendment to the Forest Plan.
Juel, Jeff	we find that the DEIS does not fulfill requirements of the National Environmental Policy Act (NEPA). In order to remedy the public process and comply with the NEPA, we believe a Supplemental Draft EIS must be prepared and circulated for public review.	Comment lacks specificity.

Author(s)	Comment	Response
Juel, Jeff	The premises of the project (as offered in the Purpose and Need section) are that logging will somehow make the forest healthier and more "resilient" because current insect and other "pest" occurrences will be lessened, and risks of future infestations will be reduced. However, the Forest Service (FS) fails to disclose any of the significant body of scientific opinion that has found that actions such as those proposed will not lessen infestations. And on one hand the DEIS says mountain pine beetles are increasing in the Project Area (PA), but in other places states they are declining.	We can anticipate management opportunties to acheive desired conditions with an awareness and understanding of disturbance ecology, the role of disturbance in ecosystem dynamics, and the appreciation that ecosystems are constantly changing. To ignore disturbance or presume a steady-state condition compromises ecological resiliency. On pages 3-22 - 3-35 of the DEIS numerous authors have been cited describing management options in restoring or maintaining resiliency. Thank you, we have adjusted in the DEIS any inconsistencies with mountain pine beetle activity.
Juel, Jeff	Although the logging may directly or indirectly affect levels of future infestations of "pests", the DEIS fails to explain how the larger ecosystem would benefit from such actions.	As described on pages 3-45 - 34-6 of the DEIS, proposed treatments would change forest composition, structure, and successional stages. Treatment goals are to promote stand resilience to disturbance and stress factors, such as insects, disease, competition, and fire. The intent is to restore insects and disease to endemic levels and modify potential fire behavior. Benefits from the proposed project will result in reducing long-term mortality from mountain pine beetle when a sufficient area is managed so partially cut stands are separated from unmanaged stands by natural buffers or treated stands. Rather than view conditions resulting from insects and disease as static and unpredictable, we should mange the land with an understanding of the processes of change, recongnize the probability of its occurrence, and manage vegetation that is resilisent to insects, disease and fire which would be a benefit across the landscape.

Author(s)	Comment	Response
Juel, Jeff	the FS has simply proposed a timber sale dressed up as something beneficial, when in fact it is nothing more than tree farming applied in a highly inappropriate location—in and near a heavily visited recreation area that supports many rare and sensitive species.	In Alternative 2, three harvest units (units 8, 16, and 59) and one non-commercial thin/fuels treatment unit (unit 14) are adjacent to the northern boundary of the Lake Como Recreation Area. In Alternative 3, one harvest unit (unit 59) and two non-commercial thin treatment units (units 8 and 14) are adjacent to the northern boundary of the Lake Como Recreation Area. In Alternative 4, two harvest units (units 16 and 59) and two non-commercial thin/fuels treatments (units 8 and 14) are adjacent to the northern boundary of the Lake Como Recreation Area. There are no units within the Lake Como Recreation Area. Lake Como Recreation Area is a high-use recreation area and provides a wide variety of recreation activities. Measures have been taken to improve forest health, protect public health and safety, and protect the visual integrity within the recreation area, such as hazard tree removal and applications of carbaryl and verbenone to help prevent infestation from pine bark beetle, and in return preserve trees that are highly beneficial in developed recreation sites for providing shade, visual screening between sites, and aesthetics. The Como Forest Health project complements management activities within the recreation area by improving forest resilience and reducing fuel loads adjacent to the recreation area. Any rare plant populations found within the project area will be buffered from any implementation that may injure or kill the plants. The rare plant species found in the area prefer habitat with open canopies to survive and thrive. The effects to threatened and sensitive wildlife species are discussed in the DEIS starting on page 3-99.

Author(s)	Comment	Response
Juel, Jeff	The Purpose and Need statements are not even reconciled with the DEIS's discussion of insects, diseases, and stand dynamics found in discussions of Vegetative Response Units (VRUs).	The VRUs are reconciled to the purpose and need as stated on pages 3-35-3-38 of the DEIS.
Juel, Jeff	The DEIS poses that the composition of the forest stands (ages of trees, species of trees and their relative ratios, etc.) are somehow not characteristic of "reference" conditions. It fails to acknowledge a significant body of science that indicates what occurred prior to industrial logging and other extractive activities in the last century or so in such ecosystems was so highly variable that the forest composition at all locations in the PA likely occurred many times in the past. In fact, the PA is healing from heavy logging and livestock grazing to the degree humans are allowing it to heal.	The DEIS on pages 3-10-3-23 references historical conditions. Field and photo observations by Leiberg and others pre-1900 documents forest composition before large numbers of European-Americans settled the area. Photographs on pages 3-11 and 3-12 by Leiberg are also a snapshot in time showing large uneven-aged ponderosa pine with grassy understories. Low elevational forests in Como were a result of frequesnt fires with variable fire severities forming a complex an intricate mosaic on the landscape. These mosaics resulted in different successional stages creating diversity and the proportion of successional stages would have varied over time. These mosaics would have created an uneven-aged stand or even-aged clumps dependent on the severity of disturbance. Fire chronologies taken in Lick Creek determined that 42 fires occurred between 1600 and 1900 with a mean fire interval of 7 years. Also, fire investigations and bog analysis by Losenky (1995) determined that vegetation structure was somewhat stable pre-1900 as decribed on page 3-10 of the DEIS. We acknowledge logging, similar to fire, has affected forest composition and structure as stated on page 3-10. Table 3.1-2 displays historic and exsisting cover types by structure. Information obtained to fill out the table was derived from Losensky's 1995 report "Historical Vegetation types for the Interior Columbia River Basin." The table provides a reference point for evaluating changes over time that result from management practices or the control of fire.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not disclose the analogous levels of risks posed by insect and other "pest" occurrences outside the proposed treatment areas, leaving this important context not analyzed.	We acknowledge that mountain pine beetle is still active in and around the project area. The long term solution to mountain pine beetle management is to create a mosaic of species, size and age classes across the landscape. The proposed treatments aim to do this and can be accomplished through silvicultural treatments and fire, natural and prescibed. Reducing the the susceptibilty of high hazard stands through silvicultural treatments can reduce the suceptibilty of surrounding low and moderate hazard stands within a drainage as stated on page 3-27 of the DEIS.
Juel, Jeff	EISs must consider pertinent scientific opinion that conflict with the FS's on the issues invoked by project proposals. It fails to do so for several topics discussed. The DEIS even grossly oversimplifies the findings from its cite, Leiberg (1899).	The IDT specialists base their existing condition and effects analyses on site-specific project data (Project File), peer reviewed scientific literature (Appendix C, Literature Cited), professional training, experience, objective analytical discussions among team members and other professionals.

Author(s)	Comment	Response
Juel, Jeff	Table 3.1-2 purports to represent "Historic and Existing Forest Structure by Cover Type" and provides percentages. However, displaying percentages such as this in the absence of disclosing normal ranges (other that single values) and standard deviations is, statistically speaking, misleading. The DEIS doesn't even cite the source for those numbers.	As stated on page 3-18 of the DEIS and continuing to page 3-19, the historical data set is from Losensky's report in 1995 "Historical Vegetation Types for the Interior Coulmbia River Basin" which covers the entire Ecological subsection M332B. His data is displayed in a percentage format. The exsisting condition percentages were calculated from stand exams conducted between 1990-2013. These exams meet protocols and basic requirements for CSE quick plot exams as defined in the Common Stand Exam Field guide for Region 1. The area of the project data set is less than 1% of the total Subsection M332B. While a on-to-one comparsion cannot be made due to differing data set scales, accuracy of historic data and accuracy and limitations of the CSE data set, the general trends reflected in table 3.1-2 support trends identified through field reconnaissance.
Juel, Jeff	None of the "Regulatory Framework" for the Fire/Fuels issue was developed in a NEPA process that analyzed the forestwide impacts of fire suppression implicit and explicit from today's science on ecosystems. This includes both the Forest Plan and the latest document mentioned, the Bitterroot National Forest Fire Management Plan (USDA Forest Service 2013 Update).	Comment focuses on items that are beyond the scope of the proposed action, purpose and need and decision to be made.
Juel, Jeff	The DEIS fails to disclose the cumulative effects of fire suppression on the PA. From reading the DEIS, general adverse impacts of fire suppression are suggested, but are not analyzed in the proper spatial and temporal context.	On page 3-76 (Figure 3.2-2 and Table 3.2-2) maps and table show the Spatial and Temporal scales used to identify Fire History in the Analysis Area and Como Forest Health Project Area.

Author(s)	Comment	Response
Juel, Jeff	The DEIS utilizes Figures such as 3.2-4 and 3.2-5 to suggest changes in fire behavior due to project activities, but the DEIS lacks adequate temporal analysis. How fire would affect the PA 10, fifteen, or more years post-project is not adequately addressed.	Fire treatment effectiveness differences in fire behavior within treatment areas were dependent on steepness of slope, position on slope, and the intensity of the main fire when it entered treatment area by alternative. A fundamental wildland fire behavior principle states that fire intensity and rate-of-spread increase as slope increases. Fuel treatments need to be more intensive (more surface fuels removed and wider crown spacing) on slopes to achieve the same effect as on flat ground. The maps on 3-80, 3-85, 3-87, 3-90, and 3-92 were run using FLAMMAP using the current stand conditions as baseline and then were modified to reflect mechanical treatment assuming 5 years (assuming life of timber sale contract) - then followed up within 0-5 years with prescribed with one initial prescribed fire maintenance entry.
Juel, Jeff	The DEIS does not explain how continued aggressive fire suppression can allow well-distributed, viable populations of species for which stand-replacing wildfires are of particular benefit, such as black-backed woodpeckers.	It is inappropriate to look at the viability of a species, such as black-backed woodpeckers, at the project level. Effects of successful fire supression on black-backed woodpecker habitat is discussed on page 3-160 of the DEIS. Viability of black-backed woodpeckers at a State and Regional scale is also discussed in this section. Between the years 2003 and 2013, wildfires have burned 248,900 acres on the Bitterroot National Forest (Table 3.3-7, page 3-121). Needless to say, although fire suppression occurs along the Wildland-Urban Interface, in high-use recreation areas (like Lake Como), and in situations where the risk of not supressing a fire in unacceptable, habitat for fire dependent species is still being created.
Juel, Jeff	There are approximately 3000 acres of suitable flammulated owl habitat and approximately 1400 acres of potential flammulated owl habitat within the Como Forest Health project area." (3-179.) The DEIS does not explain why flammulated owls are not found in the PA.	The project biologist is not exactly sure why flammulated owls are not found in the project area, but uninhabited suitable habitat is not unique to the project area. Winters (1974) discussed the idea that flammulated owls are "semi-colonial", meaning they aggregate into territorial clusters but do not

Author(s)	Comment	Response
		comprise colonies. Subsequent authors (internal references in McCallum 1994) have written about finding clusters of owls with large unoccupied spaces in between them. There are two hypotheses regarding this unoccupied habitat - either large areas of suitable habitat are unoccupied (the unsaturated habitat hypothesis), or large areas of seemingly suitable habitat area not in fact suitable (the suboptmal habitat hypothesis) (McCallum 1994). The 'unsaturated habitat' hypothesis is based on the idea that if suitable habitat is unoccupied, the cause is most likely due to the demography of the species and the landscape mosaic of the region. Flammulated owls are intrinsically incapable of rapid population growth due to their small clutch size and un-nomadic habits. Therefore, it is plausible that the species suffered a continental population decline in connection with widespread habitat change in the past century and have not yet re-colonized the suitable, but currently unoccupied habitat that is available on the landscape. The 'suboptimal habitat' hypothesis is based on the idea that not all the habitat that appears to humans to be suitable is in fact suitable by the owl's standards. So, maybe flammulated owls haven't moved back into the suitable habitat identified in the project area after years of habitat change, or perhaps our understanding of suitable habitat may not be detailed enough, and we may have over-estimated the amount of habitat that is present. The DEIS has acknowledged that the flammulated owl habitat in the project area is not the highest quality and while there are large mature trees and large snags in the project area, they are relatively scarce.

Author(s)	Comment	Response
		Reference: McCallum, D. Archibald. 1994. Review of Technical Knowledge: Flammulated Owls *in* Flammulated, Boreal, and Great Gray Owls in the United States: A Technical Conservation Assessment. Edited by Gregory D . Hayward and Jon Verner. 1994. U.S. Forest Service General Technical Report, RM-253. ix + 213 pp.,
Juel, Jeff	Pileated woodpeckers, one of two old growth management indicator species for the Bitterroot National Forest, live primarily in habitat type groups A and B (Old Growth Type 1)." (3-104.) This is a grossly overly general statement, which is why no scientific reference is provided.	A full discussion of pileated woodpecker habitat, complete with scientific references, can be found begining on page 3-237 of the DEIS. The statement highlighted in your comment from page 3-104 is part of the Old Growth Habitat report and should be read in context with the preceeding and subsequent paragraphs on that page. The intent of those three paragraphs was to identify that there are different types of old growth forests providing different habitat components for wildlife, and the BNF's two old growth management indicator species use these habitats differently. Pileated woodpeckers primarily use old growth habitat made up of ponderosa pine and marten primarily use old growth habitat dominated by fir and spruce. If this is an incorrect statement, please provide a scientific reference so we can recitify this error. The three paragraphs on page 3-104 have been re-written and clarified in the FEIS.

Author(s)	Comment	Response
Juel, Jeff	The DEIS has no plan for assuring that the amount of old growth to meet forest plan standards will be recruited from mature stands.	In the DEIS there is no direct statement indicating that old growth will be recruited from mature stands however on pages 3-46 - 3-50 it is consistently stated the objective of harvest is to improve the exisiting stands by featuring the largest diameter classes. Silvicultural prescriptions developed for the project adress retaining large tree structure. Stand exams completed from 1990-2013 indicate there are many large trees in the project area but lack the age parameters to qualify for old growth. Most of the project area as referenced by table 3.1-2 on page 3-19 of the DEIS represents major cover types and the majority of cover types is in the mature structure, 101 to 150 years old. Late successional forest makes up a large percentage of this structure class and could be recruited into developing into old growth as defined by Greene et al. 2005.
Juel, Jeff	Compared to the FIA data, old growth habitat within the Como Forest Health project area is below the Forest-wide estimate." (3-107). How many FIA plots are there in the PA	The integrity of FIA sample locations is protected to assure that they remain representative of unsampled locations. FIA cannot release exact coordinates for FIA sample locations because of the Fiscal Year 2000 Consolidated Appropriations Bill (PL 106-113), which included language that modified the Food Security Act of 1985 (7 U.S.C. 2276(d)) to include FIA plot locations. This protects the privacy of landowners who grant FIA access to their lands, as well as to protect the long term integrity of the FIA sample plots. In compliance with Public Law, FIA closely restricts disclosure of exact coordinates for all FIA sample locations, including those on public lands. This protects FIA sample locations from unauthorized access and

Author(s)	Comment	Response
		unintentional impacts or improper tampering. Any person who publicly releases restricted information without proper authorization may be fined not more than $10,000 or imprisoned for not more than 1 year, or both.
		The FIA provides a congressionally mandated, statistically-based, continuous inventory of the forest resources of the United States and delivers a statistically sound representative sample designed to provide unbiased estimates of forest conditions at large and medium scales. This inventory design is appropriate for making estimates of old growth percentages on a Forest scale, and in this EIS, is combined with stand-level project-specific old growth inventory for a more complete analysis of old growth percentages in the project area. Sampling design and estimation features can be found here: http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs080/gtr_srs080.pdf, and will be included in the project file. FIA Quality Assurance fact sheet will also be included in the project file, and it can be found here: http://www.fia.fs.fed.us/library/fact-sheets/data-collections/QA.pdf.
Juel, Jeff	Information concerning the condition of old growth stands outside of the project area is incomplete at this time." (3-108.) Does this mean that the forestwide inventory of old growth is incomplete or innaccurate?	The sentence in the Incomplete and Unavailable Information section on page 3-108 has been re-written for clarification purposes. The original intent of the statement was to disclose that old growth stands outside of the project area have not

Author(s)	Comment	Response
		been analyzed in the same method as the stands examined inside of the project area during field work. This is important to note because the Forest Plan requires old growth percentages to be calculated by third order drainage. The boundaries of the third order drainages in the Como Forest Health Project extend past the project area boundary, but stand exams for the project were only done inside of the project area. Stand exams done for this project were done in a more statistically sound data collection protocol than the previous methods used for old growth inventory. The new Regional stand exam protocols contain basic requirements for exams that weren't collected in previous stand-level old growth inventories. This makes the two survey efforts difficult to compare inside and outside of the project boundary. Stand exams have not been done outside of the project boundary due to a lack of available resources (time and personnel) on the Forest. Within the project area, we compared the amount of old growth acres that were counted using the new protocol with the old growth acres identified in the older data set. The net difference between the two inventories was an increase of 2.8 acres. The new inventory identified three stands that were incorrectly classified in the original inventory: one 19.9-acre stand was added as old growth that was not previously considered old growth, and two stands (7.8 and 9.3 acres in size) that were originally labeled as old growth but done so incorrectly. The forest-wide old growth inventory done through the Forest Inventory Analysis (FIA) data is still considered complete and accurate. This inventory design is appropriate for making estimates of old growth percentages on a Forest scale. It is only the stand-level old growth inventory that is out of date outside of the project area.

Author(s)	Comment	Response
Juel, Jeff	Individual old trees are a component of old growth habitat, but as individual trees do not constitute old growth habitat as defined in the Forest Plan or the scientific literature. For purposes of this analysis, as required by the Forest Plan, old growth habitat classification is based on stand-wide structure and characteristics. (3-103, 104.) "(T)he standards specify that old growth forest should be 40 acres or larger." (3-102) How many of the FIA old-growth plots across the Forest have been determined to meet this minimum stand size of 40 acres?	The integrity of FIA sample locations is protected to assure that they remain representative of unsampled locations. FIA cannot release exact coordinates for FIA sample locations because of the Fiscal Year 2000 Consolidated Appropriations Bill (PL 106-113), which included language that modified the Food Security Act of 1985 (7 U.S.C. 2276(d)) to include FIA plot locations. This protects the privacy of landowners who grant FIA access to their lands, as well as to protect the long term integrity of the FIA sample plots. In compliance with Public Law, FIA closely restricts disclosure of exact coordinates for all FIA sample locations, including those on public lands. This protects FIA sample locations from unauthorized access and unintentional impacts or improper tampering. Any person who publicly releases restricted information without proper authorization may be fined not more than $10,000 or imprisoned for not more than 1 year, or both. The FIA provides a congressionally mandated, statistically-based, continuous inventory of the forest resources of the United States and delivers a statistically sound representative sample designed to provide unbiased estimates of forest conditions at large and medium scales. This inventory design is appropriate for

Author(s)	Comment	Response
		making estimates of old growth percentages on a Forest scale, and in this EIS, is combined with stand-level project-specific old growth inventory for a more complete analysis of old growth percentages in the project area. Sampling design and estimation features can be found here: http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs080/gtr_srs080.pdf, and will be included in the project file. FIA Quality Assurance fact sheet will also be included in the project file, and it can be found here: http://www.fia.fs.fed.us/library/fact-sheets/data-collections/QA.pdf.
Juel, Jeff	Why does the DEIS not consider the large snag size needed by pileated woodpeckers as the FS's own science indicates? For habitat quality purposes, snags as small as 9" dbh are considered the same as 30" dbh snags (3-118), which is inconsistent with best available science	Old growth stand exams count all snags ranging from 9 " dbh up to 99.99" dbh, following Regional protocol. Page 3-118 is in the Snag section of the DEIS, where benefits to all snag-associated wildlife species are considered, not just pileated woodpeckers. There is no where in the DEIS that states 9" dbh snags provide the same habtiat components as 30" dbh snags, however we do recognize that snags of various sizes, species, origins and states of decay benefit a variety of species for a variety of reasons. This is discussed on page 3-116 of the DEIS. In order to collect more informative data for future projects, snags counted during stand exams will be categorized into size classes.

Author(s)	Comment	Response
Juel, Jeff	We find the DEIS's determination that Canada lynx found in the PA are "transient" to be arbitrary. That designation leads to consideration of the PA to be "unoccupied" and thus the DEIS recognizes very low standards of habitat protection.	The designation that Canada lynx are "transient" on the Bitterroot National Forest is an official designation from the United States Fish and Wildlife Service. This can be found in the Project File document PF-WILD-036, or at http://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/Forests/Bitterroot_sp_list.pdf. Changing the official designation of Canada lynx is beyond the scope of this project and beyond the control of the Bitterroot National Forest. The Bitterroot National Forest is considered to be "unoccupied" by Canada lynx because it does not meet the requirements to be considered "occupied" as defined by the Amended Lynx Conservation Agreement between the Forest Service and the USFWS (USDA Forest Service and USDI Fish and Wildlife Service 2006). To be considered "occupied" there needs to be at least two (2) verified lynx observations or records since 1999 or evidence of lynx reproduction on the National Forest. Following direction by the Regional Forester (PF-WILD-037), the Bitterroot National Forest uses the same management standards of habitat protection as "occupied" Forests with "core areas" of lynx habitat.
Juel, Jeff	The DEIS states that locations outside of mapped lynx habitat in the Blodgett-Lost Horse Lynx Analysis Unit (LAU) are have lynx habitat qualities essentially the same as areas inside the mapped lynx habitat (3-130). Yet it fails to correct this habitat mapping error. It thus presents inadequate analysis of cumulative effects.	The remapping of lynx habitat needs to go through the NEPA process as a stand-alone effort and is beyond the scope of this project. The cumulative effects analysis for Alternatives 2 and 3 was updated in the FEIS to include the habitat that was observed outside of the mapped habitat.

Author(s)	Comment	Response
Juel, Jeff	Why does the FS even include aspects of Alternatives 2 and 3 that would violate the NRLMD, without proposing plan amendments? What is the point? The Forest Service must complete a programmatic consultation with the U.S. Fish & Wildlife Service on the forest plan, in the context of forestwide Canada lynx Critical Habitat designation and the Northern Rockies Lynx Management Direction (NRLMD). We question the adequacy of habitat standards and other direction set by the NRLMD itself. The Forest Service would be hard-pressed to find LAUs in the Northern Rockies—heavily logged or otherwise—that fall below NRLMD habitat percentages. Management direction must go beyond validating the management status quo, which is the situation that led to the ESA listing of the lynx.	The NRLMD FEIS management direction incorporates the Terms and Conditions the USFWS issued in their Biological Opinion and Incidental Take Statement (USFWS 2007). Direction in the NRLMD FEIS ROD applies to mapped lynx habitat on National Forest System land presently occupied by lynx, as defined by the Amended Lynx Conservation Agreement between the Forest Service and USFWS (PF-WILD-035). However, all National Forests are encouraged to consider the direction in the NRLMD FEIS ROD when designing management actions in unoccupied lynx habitat, such as on the BNF, but are not required to follow this direction (USDA Forest Service 2007a). Therefore, even though Alternatives 2 and 3 violate the NRLMD, they do not necessitate a Forest Plan amendment. The Forest will consult with the USFWS on the project effects of the Como Forest Health Project if Alternative 2 or 3 is chosen to implement. Consulting with the USFWS on the Forest Plan, critical habitat designations, or the NRLMD is beyond the scope of this document. Challenging the adequacy of the standards and direction found in the NRLMD is also beyond the scope of this project.
Juel, Jeff	Does the FS consider the "recommended" 30% elk habitat security area to be a part of its body of best available science? In any case, why would it be acceptable to lower it below the already currently reduced 21%? We have the same criticism of the DEIS's consideration of Habitat Effectiveness.	In 2013, McCorquodale reviewed the scientific literature on elk, roads, and traffic. In this review, he found an extenisve body of literature documenting decades of research that "demonstrates high road densities and traffic negatively affect elk use, and - in hunted populations - elk vulnerability to excessive mortality". As results from a plethora of studies addressing the effects of roads on elk behavior accumulated during the 1970s and 1980s, these findings were incorporated into land management objectives and strategies by agencies. The elk management guidelines in the Forest Plan for the Bitterroot National Forest comes from this research. Over the

Author(s)	Comment	Response
		years, several authors attempted to synthesize research results into an emerging management paradigm, particularly to deal with elk habitat security issues, like Hillis et al. (1991). McCroquodale's (2013) review indicates that these 'guideline' attempts in the early 1990's are the most recent guidelines available, but he also discusses a new group of federal and state scientists reviewing the issue of integrating elk habitat management objectives into land management planning. The group of scientists are developing 'next generation' management models, however the models are still in the Beta stage and unavailable for use. We acknowledge that the traditional concept of elk security and the accompanying management recommendations need to be updated to be adaptive to new and current challenges in elk management. The elk section in the FEIS has been updated to reflect this literature review. However, we are using what is available to us at the present time to make the best decisions possible. Additionally and as documented in the DEIS, elk habitat security is not the only method being used to ensure there is adequate elk habitat within the project area. Road density, strong predictor for elk distribution during the hunting period (Proffitt et al. 2013), is analyzed in the project area along with habitat classification ratios. Within the Project Area, the only road that is open year-round is the main road connecting Lost Horse Corridor with Lake Como, FSR 5621, and therefore Elk Habitat Effectiveness cannot be increased in the third order drainages within the project area without closing this main road. None of the action alternatives will add to the open road density, decreasing the EHE. The action alternatives remove a maximum of 243 acres of security habitat, which translates into a decrease of 1% across the Trend Count Unit.

Author(s)	Comment	Response
		The elk population in the Lost Horse - Tin Cup Trend Count Unit is above the 10 year average and is five times higher than the 1987 planning threshold (page 3-221 of the DEIS). References: McCorquodale, S. M. 2013. A Brief Review of the Scientific Literature on Elk, Roads, and Traffic. Washington Department of Fish and Wildlife. Available at: http://wdfw.wa.gov/publications/01491/wdfw01491.pdf Proffitt, K. M., J. A. Gude, K. L. Hamlin, and M. A. Messer. 2013. Effects of Hunter Access and Habiat Security on Elk Habitat Selection in Landscapes with a Public and Private Land Matrix. Journal of Wildlife Management 77(3):514-524.
Juel, Jeff	Why does the FS consider it appropriate that the "major long term (negative) effects in the immediate foreground of the Lake Como Recreation Area roads, trails and water area" (in terms of scenic integrity) would be acceptable in such a popular and highly used recreation area? Has the FS found some collaborative entity that finds such impacts acceptable?	The loss of highly valued scenic integrity in the Lake Como Recreation Area as a result of the project (Alternative 2 and 3) was weighed against public values for forest health and the reduction of risk for pine beetle mortality. No collaborative entity address support for negative visual impacts.

Author(s)	Comment	Response
Juel, Jeff	Why does the DEIS state that "there are no system trails or developed recreation sites within the analysis area"? (3-266.)	A developed recreation site is characterized as having a development scale of 3, 4 or 5, which is designed and developed for specific public uses, often having hard-surfaced or paved walkways and activity areas and a high degree of regimentation (FSM 2330.3 Exhibit 01). Developed sites have facilities in place primarily for the comfort of users. There are no developed recreation sites within the project area. There is approximately 1.5 miles of a designated Forest Service trail (trail number 502) on the southern boundary of the project area. Trail number 502 starts at the Lake Como trailhead and follows the northern shore of Lake Como for 3 miles, to its terminus and intersection with trail number 580 at the inlet of Lake Como. In the action alternatives, the southeastern boundary of unit 8 borders the trail. There are no system trails within units.
Juel, Jeff	The DEIS does not demonstrate how it is minimizing the road system in compliance with the Forest Plan or the Travel Management Regulations and their related Directives.	The Como Forest Health Protection Project evaluated the road system within the project area. A science based roads analysis was used to determine the appropriate road system needed for future management within the project area.
Juel, Jeff	The DEIS also fails to demonstrate consistency with Travel Management Regulations subparts B and C and their related Directives. The DEIS does not disclose any Road Management Objectives, which would follow from designations under Subpart B.	Subpart C is part of the Bitterroot National Forest Travel Plan, and not being considered in this project area. Currently the entire project area has an area closure which restricts travel to open roads within the project area. The area is closed to cross country travel yearlong, including snowmobiles. Road Management Objectives will be completed on all roads within the project area to reflect the record of decision.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not demonstrate consistency with the Executive Orders 11644 and 11989. The Executive Orders clearly state: (1) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, or other re-sources of the public lands. (2) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. (3) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses…	The Como FHP does not propose designation of any new ORV/OHV routes or areas and there are currently no designated ORV/OHV routes in the project area. Therefore, Executive Orders 11644 and 11989 do not apply.
Juel, Jeff	The action alternatives would feature "Closure of an unauthorized OHV trail" (2-14). The DEIS fails to disclose the full extent of this unauthorized trail, and its environmental effects. The DEIS does not disclose if the FS has taken a hard look at the PA to determine the full extent of other unauthorized motorized routes.	The Forest Service has looked at the project area and has identified a couple unauthorized off-highway vehicle trails. The trail that is of most concern is approximately 400' long and provides access to a series of roads that are closed to motorized use. To prevent further off-road use, barrier rocks have already been placed at the point where the trail leaves NFSR 5608 and travels cross-country up the hill. Further rehabilitation, however, is needed to reduce erosion and improve watershed quality. Chapter 3.5.4 Environmental Consequences in the DEIS discloses that the vegetation will be more open alongside roads which may result in the potential for off-road travel. The project area will be monitored following project completion and areas will be blocked off as needed for resource protection. The Existing Condition of Affected Environment (Chp. 3.5.2) will be updated to include disclosure of the unauthorized off-highway vehicle use trails within the project area.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not disclose that the R-1 Soil Quality Standards (SQS) are based upon the amount of damage that is operationally feasible, not scientific data that estimates land and soil productivity losses caused by up to conditions that meet the definition of detrimental soil disturbance (DSD) covering 15% of the areal extent of activity areas. The SQS were developed internally by the agency, without the use of any public process such as Forest Planning, NEPA, or independent scientific peer review. We also note that it doesn't matter how sensitive the soils, how steep the land, how poor the site is for growing trees, the SQS standard is the same—15%. Truly, the SQS really is mostly an operational feasibility standard.	Application of the 15% aerial limit has been debated. Some Soil Scientists, for example retired Region 6 Soil Scientist Bob Mueresse feels "Applying the 15% aerial limit for detrimental damage is not correct, it was never the intent of the 15% limit and NFMA does not say that we can create up to 15% detrimental conditions, it says basically that we cannot create significant or permanent impairment, period." How that works out in terms of practicality is the problem, it may be more appropriate to look at the overall effect of an impact on an area. For example, displacement of several small patches of ground may not be significant to overall productivity on a site whereas displacement of one or two large areas may be significant.
Juel, Jeff	The DEIS states, "Gomez et al. (2002) found that on sandy soils severe compaction actually increased water holding capacity. The severe compaction was found to increase the number of days that water was available for uptake from 45 days to 131 days. The water holding capacity was increased in the sandy loam soils by altering the soil physical structure to create more fine pores for water storage." (3-288.) What is the FS's point here—is it that the SQS limitations on detrimental soil compaction are counterproductive?	Powers (1990) (PF-SOIL-030) cites that the rational for the 15 percent limit of change in soil bulk density is largely based on collective judgment. The FS estimates that a true productivity decline would need to be as great as 15% to detect change using current monitoring methods. Thus the soil-quality (threshold) standards are set to detect a decline in potential productivity of at least 15%. This does not mean that the FS tolerates productivity declines of up to 15%, but merely that it recognizes problems with detection limits. Also, a 15% increase in bulk density may not be detrimental to productivity site and soil productivity depends on the soil and ecosystem in which it is found. In the case of increased water holding capacity in a water limited soil environment, increases in productivity may be observed.

Author(s)	Comment	Response
Juel, Jeff	The DEIS states, "The proposed treatment units were field reviewed using a walkthrough survey to get an overview of each unit. The surveys identified past management activities such as timber harvest that still result in DSD. Soil surveys followed guidance provided in the documents listed below." (3 -274.) But the DEIS itself does not disclose the intensity of the "walkthrough" soil surveys, and the expected accuracy of their estimates of current DSD.	Methodology for walkthrough survey and soil scientist qualifications are explained on page 15 of the Region 1 Approach to Soils NEPA Analysis Regarding Detrimental Soil Disturbance In Forested Areas A Technical Guide, March 2009. SOILS-002.
Juel, Jeff	the DEIS states, "Old skid trails remaining from past timber management operations are present in some of the ground based units. These old trails have naturally rehabilitated and do not currently have detrimental soil conditions." Again, the DEIS does not state the basis of this claim of deliverance from DSD, nor does it explain the methodology for this emancipation proclamation.	Detrimental compaction on historic skid trails has recovered in many areas but there are still portions of trails that have detrimental compaction that limit productive root growth. Existing amounts of DSD for each treatment unit are provided in Tables 3.6-10 through 3.6-12. The existing amounts of DSD are included in cumulative soil effects analyses for each alternative.
Juel, Jeff	We also note that the standard FS interpretation of soil standards is that existing soil damage (DSD, deficits of organic matter, nutrients, etc.) outside of proposed treatment areas are irrelevant for EISs such as this one. Essentially, the DEIS takes a position that existing damaged conditions to land productivity outside areas the agency proposes to "treat" don't cumulatively affect vegetation, water, animals, bird, fish, forest density and composition, etc. which makes no sense.	Scale of the detrimental soil disturbance assessment is discussed in section 3.6.5.1 Methodology. Discussion of general soil condition at the watershed scale is provided in the section "Cumulative Effects of Harvest at the Project Scale" and watershed scale harvest is displayed in Table 3.6-8.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not properly distinguish between the issues of soil disturbance and soil productivity. Whereas soil disturbance measures physical signs of potential soil productivity losses, the FS's measures of soil disturbance do not necessarily provide scientifically valid and reliable measures of soil productivity—the latter being the focus of NFMA requirements.	The Bitterroot National Forest Plan adheres to the Regional soil quality guidelines to ensure soil resources are sustained. Soil properties including infiltration, water holding capacity, and filtering capabilities will be maintained if less than 15% of an activity area has been detrimentally disturbed. The Forest is bound by the Forest Plan Direction to "plan and conduct land management activities so that reductions of soil productivity potential caused by detrimental compaction, displacement, puddling, and severe burning are minimized" (BNF Forest Plan II.25 (7). This is being accomplished through project design, mitigations, and the implementation of BMP's. BNF Forest Plan II-25(8) also states "Plan and conduct land management activities so that soil loss, accelerated surface erosion and mass wasting, caused by these activities, will not result in an unacceptable reduction in soil productivity and water quality", again this is accomplished through project design, mitigations, and the implementation of BMP's.

Author(s)	Comment	Response
Juel, Jeff	The DEIS has no scientific explanation as to why its definition of DSD considers only alterations to physical properties, but not chemical or biological properties. If there is a scientific explanation, we ask that you disclose it.	There is literature to substantiate using the soil quality standards as surrogates for soil productivity (Page-Dumroese et al. 2000 Meurisse 1987 Powers 1990 Cline and Ragus 1998). The action alternatives are designed to leave a variety of organic matter on the site. The practice of leaving organic matter on site provides for microbial populations, which help maintain site productivity (Harvey et al. 1994). To summarize, by maintaining organic matter and ground cover on at least 85 percent of the site, as prescribed in the action alternatives, chemical and biological properties will not be detrimentally altered. The design features (Chapter 2) and Region 1 soil quality guidelines are prescribed to achieve this desired outcome. The Bitterroot National Forest Plan adheres to the Regional soil quality guidelines to ensure soil resources are sustained. Soil properties including infiltration, water holding capacity, and filtering capabilities will be maintained if less than 15% of an activity area has been detrimentally disturbed. The Forest is bound by the Forest Plan Direction to “plan and conduct land management activities so that reductions of soil productivity potential caused by detrimental compaction, displacement, puddling, and severe burning are minimized” (BNF Forest Plan II.25 (7). This is being accomplished through project design, mitigations, and the implementation of BMP’s. BNF Forest Plan II-25(8) also states “Plan and conduct land management activities so that soil loss, accelerated surface erosion and mass wasting, caused by these activities, will not result in an unacceptable reduction in soil productivity and water quality.” Again, this is accomplished through project design, mitigations, and the implementation of BMP’s.

Author(s)	Comment	Response
Juel, Jeff	How does the FS measure to determine if an incident of mass movement has improved soil productivity? (Id.)	Mass movement is defined in the R1 Supplement to FSM 2554 as "the detachment and downslope movement of soil or the surface mantle in the form of debris slides/avalanches or deep seated rotational failures or slumps". Some types of mass movement may improve soil productivity. (E. G. Soil creep or a rotational slump may improve aeration on some soils. When the mass movement improves soil productivity, do not include them in the areal extent of detrimental soil disturbance. Manage these areas to maintain slope stability, water quality and ecosystem functions. No mass movement activity (management related or natural) was identified in the project area (see section 3.6.4.2 Desired Condition).
Juel, Jeff	Soil productivity is a site-specific variable and dependent on a number of climatic characteristics and soil forming factors that occur at very small scales. Soil productivity can vary from one square foot to the next with each area functioning independently. Thus, the highly variable and independent nature of soil productivity requires site-specific analyses to maintain the proper context. With that in mind, what is the scientific explanation for the SQS's position that detrimental displacement "is the removal of 1 or more inches (depth) of any surface soil horizon, usually the A horizon, from a continuous area" but only if that continuous area is greater than 100 square feet?	Soil productivity is site specific as stated but assessment of activity areas requires guidelines to be able reasonably measure soil conditions. It is not feasible to track all soil disturbances down to the square inch across a treatment unit. The R1 SQS designation of detrimental displacement as continuous areas greater than 100 square feet was created to provide for realistic measurement of soil disturbance. The ability to account for areas displaced areas smaller than 100ft2is not practical.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not disclose the degree to which the productivity of the land been affected in the project area and forestwide due to noxious weed infestations, and how that situation is expected to change in the coming years and decades. The Forest's noxious weed treatment program is mitigation for management activities which exacerbate the spread of noxious weeds. The DEIS fails to disclose the effectiveness of this mitigation.	All invasive plant sites are documented, mapped, and described. Invasive plant specialists regularly assess, treat, and monitor invasive plant sites on the Forest.
Juel, Jeff	The Bitterroot National Forest admits that subwatersheds that have high levels of existing soil damage could indicate a potential for hydrologic and silviculture concerns. (USDA Forest Service, 2005b, p. 3.5-11, 12.) Kuennen et al. 2000 (a collection of Northern Region soil scientists) agree: An emerging soils issue is the cumulative effects of past logging on soil quality. Pre-project monitoring of existing soil conditions in western Montana is revealing that, where ground -based skidding and/or dozer-piling have occurred on the logged units, soil compaction and displacement still are evident in the upper soil horizons several decades after logging. Transecting these units documents that the degree of compaction is high enough to be considered detrimental, i.e., the soils now have a greater than 15% increase in bulk density compared with undisturbed soils. Associated tests of infiltration of water into the soil confirm negative soil impacts; the infiltration rates on these compacted soils are several-fold slower than rates on undisturbed soil.	Opinion - Information provided by Kuennen et. al. 2000 is not relevent since site conditions and soil properites are considerably different than those present in the Como project area.
Juel, Jeff		

Author(s)	Comment	Response
	…The effects of extensive areas of compacted and/or displaced soil in watersheds along with impacts from roads, fire, and other activities are cumulative. A rapid assessment technique to evaluate soil conditions related to past logging in a watershed is based on a step-wise process of aerial photo interpretation, field verification of subsamples, development of a predictive model of expected soil conditions by timber stand, application of this model to each timber stand through GIS, and finally a GIS summarization of the predicted soil conditions in the watershed. This information can then be combined with an assessment of road and bank erosion conditions in the watershed to give a holistic description of watershed conditions and to help understand cause/effect relationships. The information can be related to Region 1 Soil Quality Standards to determine if, on a watershed basis, soil conditions depart from these standards. Watersheds that do depart from Soil Quality Standards can be flagged for more accurate and intensive field study during landscape level and project level assessments. This process is essentially the application of Soil Quality Standards at the watershed scale with the intent of maintaining healthy watershed conditions. (Kuennen et al., 2000; emphasis added) FS hydrologist Johnson, 1995 noted this effect from his reading of the scientific literature: "Studies by Dennis Harr have consistently pointed out the effects of the compacted surfaces (roads, skid trails, landings, and firelines) on peak flows." Elevated peak flows increase both bedload and suspended sediment, which are not adequately discussed in the DEIS. Nothing in the DEIS's watershed analysis section specifically addresses the hydrological implications of the cumulative soil damage caused by past management added to timber sale-	Text was added to the Hydrology section 3.7.4.8 - Effects Common to All Action Alternatives to address the comment. Harr researched exclusively in the coast ranges of Washington and Oregon, and found harvest and road building activity could affect runoff regimes if they were intensive. Harr et al 1975 report: "Peak flows were increased significantly after road building, but only when roads occupied at least 12% of the watershed. Roads had no detectable effect on volumes of storm hydrographs." Lick Creek, with the highest road density of the three project area watersheds, has only 1% of its area in roads (29.4 miles of road, estimated at 16 foot width for 57 acres in a 4,736 acre watershed). Given the difference in precipitation and cumulative road surface, it is unlikely the flow regime has been affected by cumulative road surfaces. (Harr, R. D., W. C. Harper, J. T. Krygier, and F. S. Hsieh (1975), Changes in storm hydrographs after road building and clear-cutting in the Oregon Coast Range, Water Resour. Res., 11(3), 436–444, doi:10.1029/WR011i003p00436.)

Author(s)	Comment	Response
	induced damage in PA watersheds.	
Juel, Jeff	The DEIS proposes to use dedicated skid trails to limit the areas experiencing long-term detrimental compaction within a unit. Again, this demonstrates the lack of any meaningful limitation, on a watershed basis, of the amount of long-term soil damage. And again, the SQS failures are revealed by allowing permanent reductions in soil productivity below arbitrarily-decided limits inside "activity areas," and unlimited amounts of areal extent damage due to roads, landings, etc. outside activity areas. "The cumulative DSD considers that 50% of the historic skid trails with existing DSD will be reused, which minimizes the amount of new soil disturbance created during yarding operations." What is the rational basis for this "considers"?	Soils assessment for the Como project followed the most recent direction provided in the Region 1 Approach to Soils NEPA Analysis Regarding Detrimental Soil Disturbance In Forested Areas A Technical Guide, March 2009. SOILS-002. Discussion of soil disturbance at the watershed scale is provided in the FEIS Soils cumulative effects and also in the Hydrology section (Table 3.7-6). Furthermore, detrimental soil disturbance is not always permenant or irreversible damage - see PC 31221. Terracing is an example of how detrimental disturbance following large scale displacement can be rehabilitated through natural processes over time. These activities would have led to compaction and displacement that would have been considered detrimental soil disturbance by Region 1 guidelines however, those effects are no longer detectable on the ground - FEIS section 3.6.4C. Detrimental soil damage is reversible if the processes (organic matter, moisture, top soil retention, soil organisms) are in place and time is allowed for recovery. Duration of effects is discussed in the FEIS 3.6.4B.
Juel, Jeff	Please cite the specific monitoring that has been performed on the Bitterroot NF that validates the assumption that use of BMPs will result in meeting R-1 SQS.	Monitoring information has been provided in Forest Plan monitoring reports. Please see PF-SOILS-007.

Author(s)	Comment	Response
Juel, Jeff		Coarse woody debris will meet amounts listed in Table 3.6-3 following all proposed treatments in activity areas.
	The DEIS's cumulative effects analysis fails to account for the ecological damage that logging has caused due to the inattention to retaining adequate amounts of coarse woody debris in past timber removal operations in the PA. There is no survey data of PA coarse woody debris. There are no cites of monitoring of similar project activities to validate the efficacy of Design Features in areas that include post-logging burns.	
Juel, Jeff		Roadside landings are part of the permanent forest road infrastructure which is not considered part of the productive land base on the forest in the R1 SQS. However, for the purpose of this analysis, disturbances from landing sites were included in the calculations for DSD (see tables 3.6-10 through 3.6-12). This clarification has been included in the FEIS.
	"Disturbances associated with landing construction are not considered DSD since landings are considered part of the forest transportation system." (3-291.) Please reconcile that with the following SQS statement: "All temporary roads, skid trails, and landings are considered to be part of an activity area."	
Juel, Jeff		The analysis is intended to provide the decision maker the complete assessment of each alternative's effects on resources. Unit specific modifications have been provided to enable the decision maker to see the full array of effects of the action alternatives and the necessary tradeoffs that would be required to meet the R1 SQS. Selection of an alternative will require the decision to include modifications provided in Table 3.6-13 to meet R1 SQS.
	Why does the FS even include aspects of Alternatives 2, 3 and 4 that would violate the R-1 SQS, and then include "Unit Specific Modifications Required to Meet R1" (SQS)? What is the point of including the unmodified units in the alternatives?	
Juel, Jeff		Please see FEIS Hydrology section 3.7.4.9, Compliance with Forest Plan and Other Relevant Laws, Regulations, Policies and Plans (page 3.7-29) for discussion on this topic. Also please see the Summary of Analysis (Hydrology section 3.7, page 3.7-1) for a brief discussion on the predicted effects of this project.
	Why does the FS believe that, with Lick Creek being a sediment-impaired stream that is 303(d) listed, it can cause even more sediment to be eroded into Lick Creek and not violate the Clean Water Act?	

Author(s)	Comment	Response
Juel, Jeff	The effects of dispersed camping activities on riparian areas is not disclosed in the DEIS.	The purpose and need of the Como Forest Health project is to: reduce potential mountain pine beetle-caused mortality in large diameter ponderosa pine, reduce fuel loads and maintain historical fire return intervals in the project area, improve forest resilience to mountain pine beetle, Douglas-fir beetle, and dwarf mistletoe, and to maintain the visual integrity of the larger Lake Como Recreation Area. The purpose and need is not to address impacts on riparian areas from dispersed camping.
Juel, Jeff	"Since there would be no difference in effects between alternatives relative to the 303d listing, the 303d listing is not an issue though it is an important factor considered in the analysis." (3-315.) Really—Alternative 2, 3, and 4 project activities wouldn't add more sediment to Lick Creek than the no action alternative?	Please see FEIS Hydrology section 3.7.4.9, Compliance with Forest Plan and Other Relevant Laws, Regulations, Policies and Plans (page 3.7-29) for discussion on this topic. Also please see the Summary of Analysis (Hydrology section 3.7, page 3.7-1) for a brief discussion on the predicted effects of this project.
Juel, Jeff	Does the Bitterroot NF receive adequate annual funding to maintain all PA roads to design standards? How much annual funding shortfalls has the BNF experienced forestwide, over the past 10 years?	Maintenance funding for the Bitterroot National Forest has been consistent that last 10 years. The forest has been able to maintain the forest maintenance crew, and secure special funding for projects the mitigate the impacts of roads on affected resources. In the event that physical conditions of roads deteriorate to a point where public safety or resource impacts are unacceptable due to lack of maintenance, those roads will be closed to public travel until concerns are addressed. In the Lick Creek watershed road conditions are very good overall. There are a few roads where steep, sustained grades have caused surface erosion from the road surface. These sections have been identified and will receive road surface drainaged improvement as mitigation measures associated with the Como FHP project.

Author(s)	Comment	Response
Juel, Jeff	What is the expected precision on the WEPP model estimates of project activities?	Text was added to the Hydrology section 3.7.4, Effects of Action Alternatives, under the subheading "Potential Sediment Production from Road Treatments, Temporary Roads and Road Use" (pages 3.7-14 and 3.7-15) to clarify the accuracy and use of this model.
Juel, Jeff	The DEIS does not display the Forest Plan Riparian Management Objectives (RMOs), disclose PA data to compare with these RMOs, nor does it disclose Project effects on these parameters.	The FEIS will include a more details regarding the current status of the RMOs in the analysis area and clarify the effects the alternative would have on the RMOs. The project has very minor effects on the RMOs. Therefore, the RMOs were discussed in general terms and the details were omitted from the DEIS.
Juel, Jeff	The FS has not completed consultation with the U.S. Fish & Wildlife Service concerning the adequacy of the critical habitat designations for bull trout. Therefore, Endangered Species Act (ESA) compliance is not assured of this Project.	The Forest will get USFWS concurrance with the bull trout Biological Assessment prior to deciding which alternative to select.
Juel, Jeff	The DEIS does not demonstrate consistency with Forest Plan requirements for the Sensitive/MIS Westslope cutthroat trout. Absence or populations below historic occurrence levels in the PA are not explained. Population viability is not assured.	The FEIS clarifies the status of westslope cutthroat trout in the analysis area, the viability of the species, and tie that to the Forest Plan's direction for westslope cutthroat trout as a sensitive and management indicator species.

Author(s)	Comment	Response
Juel, Jeff	The DEIS fails to adequately analyze and disclose the impacts of past and ongoing actions on the wildlife, fisheries, ecosystem functions and components, and other natural characteristics of the PA. It fails to map or adequately disclose the locations of past and ongoing logging and other vegetation-altering management actions. It fails to consider cumulative effect of livestock grazing, hardly even mentioning that most of the PA falls within the Trapper Peak grazing allotment, and gets annually grazed to an undisclosed degree by exotic ungulates. The interactions between livestock grazing, forest composition, and fire is completely ignored. The effects grazing has upon spread of noxious weeds, impacts on riparian areas and fish habitat, impacts on aspen, and populations of native ungulates are downplayed in the DEIS and inadequately analyzed.	The effects of cattle grazing are assessed in three places in the Fisheries report: Table 3.8-3: Summary of the Primary Cumulative Effects to Aquatic Species and Habitats in the Cumulative Effects Analysis Area, in Section 3.8.3, Existing Condition of the Affected Environment, and under the subheading of Ongoing and Future Activities within the alternative assessment in the Enviromental Consequences section (3.8.4.3). This report assess the cumulative effects to aquatic habitat, fishereies and riparian areas. The effects of cattle grazing are discussed in the Wildlife report in the wolverine (3.3.4), western toad (3.3.10), and elk (3.3.12) sections on pages 3.3-146, 197, 199, 226, and 232 of the DEIS. Cumulative effects of ongoing and future activities are analyzed in each section of the wildlife report. Within the project area the grazing has met the forest plan standard and within the allowable measures. Documentation is in the project file showing Forest Plan standards met.

Author(s)	Comment	Response
Juel, Jeff	The Como Forest Health project moves the project area towards desired conditions described in the Forest Plan." (1-6.) Which specific forest plan desired conditions is the DEIS talking about? Regardless, the notion of "moving toward" some desired conditions (DCs) reflects an outdated and dysfunctional paradigm, because it is conceptualized as the Forest Service doing the pushing of the ecosystem in some direction. This is ecologically nonsensical, because natural systems are already "moving"—they are naturally dynamic. They may be going slowly, or not heading on a direct or certain path, which doesn't mesh well with the FS's linear-minded management paradigm	The relevant desired conditions described in the Bitterroot Forest Plan (Chapter II-12 to II-17) that involve this site-specific project include (to varying degrees): visual quality, wildlife and fish, timber, water and air, and road system. A specific description example of desired condition for vegetation in the project area is located in the DEIS, Ch. 3.1.2.2, Silviculture and Forest Management.
Juel, Jeff	The DEIS reflects no consideration of an option to get on the train to where natural processes go, instead the FS proposes to run the train. Yet natural processes ran the train for countless centuries, resulting in abundant resources, wildlife populations, and clean water. In the early 20th century managers hijacked the national forest train for narrow purposes—exploiting one or more resources at the expense of the others. More recently, managers color this highjacking by use of virtuous terms such as "restoration"—still with hubris and limited understanding. In any case the train gets run off the tracks. The evidence is written in the present state of forest ecosystems—lost and imperiled native species, undesirable invasive species taking a larger and larger hold, and streams presently "not functioning" in the managed landscape.	The no action alternative presents an option in which no additional managment will occur, beyond what is ongoing. In addition to analyzing the effects on wildlife, plants, invasives, and streams the DEIS contains a number of design features and mitigation measures to minimize harmful effects on these resources.

Author(s)	Comment	Response
Juel, Jeff	The DEIS fails to discuss that the likely effects of climate change on the PA, including that the "desired" vegetation conditions may not be sustainable under likely climate change scenarios. There is no acknowledgement in the DEIS of the body of scientific literature on climate change. Likewise, the DEIS ignores scientific opinion on forest management's negative effects on carbon sequestration.	The Como FHP Final EIS will contain a separate chapter on the climate change topic.
Juel, Jeff	"Insects and diseases such as dwarf mistletoe and Douglas-fir bark beetle are active in the moister, mixed conifer stands. In some stands, these complexes are within natural parameters and help regulate stand conditions. In other stands, these complexes reduce stand vigor or inhibit achieving management objectives." (1-4.) Does this refer to any management objectives other than timber production?	Yes, many management objectives are defined in The Bitterroot National Forest Plan of 1987. The Forest Plan sets out basic management direction and guides all natural resource management activities. Forest Plan objectives and goals are given on pages II-2-7 and Management Areas (MAs) are listed between pages III3-80. Within the DEIS goals and objectives directly applicable to each resource are defined in those sections.
Juel, Jeff	The DEIS fails to cite all the pertinent, applicable forestwide and Management Area (MA) standards, and demonstrate that the project would be consistent with them.	Comment lacks specificity on the citation of "pertinent" MA standards. MA goals are summarized in the DEIS, Ch. 1.8. More specific standards and guidelines are described in the Chapter III of the Forest Plan and cited as appropriate in the resource-specific sections of the DEIS, Chapter 3.

Author(s)	Comment	Response
Juel, Jeff	"Because this parcel of land was not part of the National Forest when the 1987 Forest Plan was developed, there are no designated MAs. Based on the conservation easement direction to "manage in "like" manner", the interdisciplinary team carried the MAs from the adjoining national forest onto the recently acquired lands for the purposes of this analysis (Figure 1.8-1). A Forest Plan amendment is proposed in the following section." (1-9.) The DEIS doesn't even display a map of the location of the recently acquired lands, or conduct a transparent process for designating MAs, as required. Furthermore, the DEIS proposes amendments that are forestwide, not PA specific, such as those for thermal cover and coarse woody debris retention. The lawful place for making such amendments is in the context of forestwide planning, not project-specific planning.	Forest Service policy states that the management of purchased lands (as in the case of the parcel mentioned) are covered by Forest Plan standards and guidelines and do not require Management Area designation. The proposed non-significant amendments are described as site-specific to the Project Area in the DEIS, Ch. 1.9.
Juel, Jeff	The DEIS provides convoluted and inadequate rationale for rejecting such an alternative. The Forest Service is not required to write a Forest Plan amendment just because current conditions do not meet standards. (That's why no Amendments are included under the No Action Alternative.) It is fully reasonable, on the other hand, for an action alternative to be included that responds to the FS Purpose and Need but whose management actions are so consistent with the Forest Plan that no amendments are needed. The DEIS's range of alternatives is too narrow to be in compliance with NEPA.	In response to comments earlier in the process, the DEIS, Ch. 2-22 examined a possible action alternative without any non-significant Forest Plan amendments. A preliminary analysis of the project area showed that current levels of thermal cover, elk habitat effectiveness (EHE), and old growth do not exist. Though management options exist to improve some of these conditions, they would not meet standards even after project implementation. Forest plan standards for coarse woody debris for some habitat types arehigher than recommended in current research. For these reasons, this alternative was not carried through analysis.

Author(s)	Comment	Response
Juel, Jeff	The DEIS states that six miles of undetermined roads exist in the PA. (1-6.) Does this mean that is all the ID Team located, or does that mean the FS has taken a hard look, and that is all there is?	The Bitterroot National Forest has taken a hard look at ground disturbance within the project area and identified those miles of undetermined road consistant with accepable National Forest System Road standards. The Bitterroot National Forest identified 6 miles of undetermined road within the project area that was constructed for previous managment activities. These roads inspected by field going personnel. Those miles determined to be needed for future management will be placed back on the National Forest System of Roads, those determined to be not needed for future management will be decommissioined. This proect area has alot of previous ground disturbance from management activities dating back to the Lick Creek Timber Sale, in 1906. There is an historic railroad grade within the project area and other ground disturbance that could be confused as a roads.

Author(s)	Comment	Response
Juel, Jeff	the DEIS states the action alternatives would "decommission" about half of these undetermined roads by doing nothing (2-14), so what's the point? Is it simply a paperwork exercise of removing them from the System inventory?	No additional rehabilitation work or soil disturbance is needed to decommission the roads because they are stable and grown in with large trees. The Bitterroot National Forest has been doing minimum road analysis on a project by project basis to determine the minimum tranportation system needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR Part 219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road and or trail construction, reconstruction, decommissioning, and maintenance. As the Forest identifies its minimum transportation system a prioritization of management needs vs. resource impact is continually being evaluated.
Juel, Jeff	The Alternative maps in the DEIS are of such poor quality that they fail to display important features of alternatives, even using the key.	The maps included in the Final EIS have fixed the problem of map clarity found in the DEIS.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not demonstrate that management is consistent with the following Forest Plan Standard: "The amount and distribution of old growth will be used to ensure sufficient habitat for the maintenance of viable populations of existing native and desirable non-native vertebrate species, Including two indicator species, the pine marten and pileated woodpecker." In the PA, amounts and distribution of old growth as per MA standards are not sufficient, and some alternatives would worsen that situation.	The Forest Plan standard quoted above is a Forest-wide standard, meaning that the amount and distribution of old growth across the entire Bitterroot National Forest, not soley in the project area, must ensure there is sufficient habitat for the maintenance of viable populations. Table 3.3-3 of the DEIS indicates there is adequate old growth across the BNF to meet Forest Plan standards.

Author(s)	Comment	Response
Juel, Jeff	Forest Plan monitoring requirements have not been followed. The DEIS does not explain why the MIS pine marten and pileated woodpeckers cannot be found in the PA, or are not at natural levels. Habitat for those, and other Sensitive species would be reduced by the project in the absence of viability assurance.	As stated in the DEIS on page 3-207, Marten monitoring requirements have not been met due to lack of funding. However, in recent years, other survey efforts documenting marten on the Bitterroot National Forest have occurred and an updated summary of these efforts has been added to the FEIS. Forest Plan monitoring requirements for pileated woodpeckers have been met. This is documented in the Forest Plan Monitoring Reports located in the project file and on page 3-238 of the DEIS. Pileated woodpeckers have been found in the project area. The FEIS has been updated to make this clearer to the reader. The project biologist does not konw exactly why marten have not been documented in the project area. Although marten were not observed in the project area, they have been documented directly outside of it, as well as across the Forest. It is assumed that marten are present in the project area. However the project area is a popular recreation area and the abundance of people and their dogs may influence the behavior of marten living there. It has also been clearly acknowledged in several places of the document that the project area lacks an abundance of complex forest structural components that marten require. The viablilty of a species cannot be assured on a project level, but it is acknowledged that habitat quantity would be reduced for pileated woodpeckers and American marten in the proposed alternatives.

Author(s)	Comment	Response
Juel, Jeff	The DEIS's Design Features don't even adopt a diameter limit for logging in old growth, even though at other locations it suggests a "diameter cap" would be used. The DEIS reflects an agency not interested in recent research or other scientific information on species such as fisher, wolverine, and lynx. For viability to be insured, the FS must provide a sound, scientifically based analysis that determines the quantity and quality of habitat needed for MIS and TES species.	The Design Feature table was updated to include the diameter limit for logging in old growth that is described in the Silviculture section on page 3-48 and 3-50 of the DEIS. The fisher, wolverine, and lynx sections contain some of the latest and most relevant literature and scientific reviews available for those species, including journal articles from 2014. Additionally, local survey data (including DNA samples) for these species from 2012, 2013 and 2014 are incorporated into the report and reflect the Bitterroot National Forest's interest and commitment to gathering scientific information on these wildlife species. A species-level viability assement is not appropriate on a project level. Part of the purpose for this DEIS is to analyze the effects of proposed activities on mulitple resources, including the habitat of MIS and TES species. This document meets that purpose with a thorough and scientific analysis following Regional guidance.
Juel, Jeff	Habitat alone cannot be used to predict wildlife populations… The presence of suitable habitat does not ensure that any particular species will be present or will reproduce. Therefore, populations of species must also be assessed and continually monitored.	Not at comment, just a quote from an EPA document.
Juel, Jeff	"Sanitation and salvage harvests may occur in stands classified as old growth if old growth characteristics are retained after logging." How consistent has the FS been with complying with this Standard following logging?	The comment refers to a statement on page 3-102 refering to the Forest Plan. There are no proposed units in the DEIS utilizing sanitation or salvage harvests. Within the project area stands 77020014, 77020107, and 76010013 were commercially treated in the late 1990's and early 2000's. Recently in 2013, these stands had detailed stand examsand currently meet old growth requirements as required by Greene et al. 2005.

Author(s)	Comment	Response
Juel, Jeff	How does the DEIS disclose effects of action alternatives under the scenario that the four watershed improvement projects (2-14) are not funded in the foreseeable future?	Please see Table 2.2-6: Mitigation Measures for the Como Forest Health Project (page2-21). The project proposes road Best Management Practices (BMP) for 6 different stream crossing sites on the proposed haul routes to minimize sediment related to timber haul activity. These mitigation measures would be implemented prior to timber haul if an action alternative is chosen. Project File document WATER-002 displays locations of mitigation measures and watershed improvements. The water resource assessment assumes only the mitigation measures noted above will be complete by the time the project would be implemented. The watershed improvement projects would be implemented as budget allows.
Juel, Jeff	The DEIS does not adequately describe Design Features or limitations for excavated skid trails and tracked line-machine (TLM) trails.	A discussion of the soil disturbance issue resulting from harvest machinery is found in the DEIS, Ch. 3.6.5.3 - Soils, Features Common to All Action Alternatives. The analysis concludes that the detrimental effects will slowly be reduced over time through natural recovery. The detrimental soil conditions from temporary roads may reduce soil productivity for several years until vegetation, organic matter, and hydrologic function is restored.

Author(s)	Comment	Response
Juel, Jeff	The DEIS states that soil damaging activities will be placed where other damaged soils already exist, "where feasible" but doesn't provide reliable numbers for how likely this would actually happen.	The DEIS states: "The cumulative DSD for the Action Alternatives takes into consideration that approximately 50% of the historic skid trails in the units with existing DSD conditions will be reused, minimizing the amount of new soil disturbance created during yarding operations." This information is based upon coordination with the soil scientist and timber sale administrator during implementation/layout of skid trail locations on recent timber sales. The monitoring of recent projects has indicated that the reuse of the existing skid trails has limited the amount of new detrimental soil compaction (PF-SOILS-007).
Juel, Jeff	What monitoring does the FS have that demonstrates it can be effective at maintaining the prescribed amounts of coarse and fine woody debris?	Region 1 Soil Quality Standards (PF-SOILS-001) require that ground cover be maintained which includes fine woody debris. Forest Plan monitoring (PF-SOILS-007) indicates harvest operations have been successful in meeting soil quality standards. Coarse woody debris following the treatments in activity areas will meet amounts listed in Table 3.6-3.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not explain how "low severity prescribed fire" (or "moderate severity") will be accomplished without excessive severity being the result. The DEIS also fails to explain how fire severity could or would be measured after management happens, to see if project objectives are met.	So there are several ways that monitoring is conducted for fire severity and its effects for Fire/Fuels as it effects to other disciplines such as vegetation management, wildlife, soils, scenery, hydrology, fisheries, rare plants, invasive plants, heritage, etc. First is the adherence to stand level silvicultural prescription by a certified silviculturist that identifies prescribed fire objectives (post thinning - commercial/non-commercial, site prep, etc) that are achievable for prescribed fire implementation for each unit treated. Generally the fuels specialist and the silviculturist will conduct walk through of units of concern to make sure fire objectives are and can be met and make recommendations for additional treatment if needed. Severity during burn implementation is monitored using burn documentation forms found in the prescribed burn plan and documented as well as direction received from the prescribed burn boss who monitors site conditions and coordinates with the firing boss to adjust firing patterns to ensure fire objectives are being met (severity). The Bitterroot National Forest also completes an Annual Monitoring Report (as per Land Management Resource Plan) and posted to the Bitterroot NF(http://www.fs.usda.gov/resources/bitterroot/landmanagement/resourcemanagement) website where individual specialists will write up effects from different projects including fire effects. The DEIS in Chapter 2 starting on 2-15 to 2-21 has Design Features that address additional mitigations for fire effects desired for the project area.

Author(s)	Comment	Response
Juel, Jeff	The wording of the BMPs provides loopholes to not meet commitments made elsewhere in the DEIS, especially those in the Design Features starting at 2-15. The DEIS does not disclose the basis of expected success of the Design Features. As one example: All gravel and borrow sources would be inspected and approved, by the Forest Noxious Weed Coordinator/Forest Botanist, before use and transport. The source will not be used if invasive plants present at the pit are not found at the site of intended use. If invasive plants are present, they must be treated before transport and use. (2-19.) The DEIS doesn't even require that thorough noxious weed surveys are to be performed along the road and other "sites of intended use."	All gravel and borrow sources are regularly surveyed. The project area was surveyed for invasive plants and including roadsides. For all projects on the Forest, the botanist surveys and inventories the area for rare plants, all vegetation, and invasive plant species. Roadsides are surveyed and monitored on a rotation by invasive plant specialists on a regular schedule.
Juel, Jeff	The DEIS does not disclose the results of effectiveness monitoring to see if noxious weed treatments and mitigations work as intended. The DEIS states that there have been eight species of invasive plants found from recent surveys in the PA. It provides no estimates on the extent of these invasions, only occurrences within project units. The DEIS indicates that invasive plants are increasing in the PA under no-action, and will increase even more under project activities. Given that reality, how can the DEIS be accurate in claiming that "All alternatives would be consistent with Forest Plan Goals to "control invasive plants…" (3-408)?	All invasive plant sites are documented, mapped, and described. Invasive plant specialists assess, treat, and monitor invasive plant sites on the Forest.

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not acknowledge the wide body of scientific literature that indicates road density is a significant factor affecting biological diversity. For example, Carnefix and Frissell, 2009 make a very strong scientific case for including ecologically-based road density standards:[...]Wisdom et al., 2000	The purpose of this project is not to decommission or obliterate roads. While it is acknowledged that unroaded areas contain higher levels of biodiversity, we do not expect this project to threaten the biological diversity of the project area. It is acknowledged that roads negatively affect both terrestrial and aquatic species, and literature is cited to support that concept (sections addressing wolverine, wolf, and elk pages 3 -350 and 361- 367 and section 3.8.4.7 of the DEIS). All of the action alternatives would decrease the road density in the Lick Creek, Rock Creek, and Lost Horse Creek watersheds (Table 3.8-4 of the DEIS). The Migration and Dispersal section in the wildlife report has been updated in the FEIS to include road density effects on wildlife.

Author(s)	Comment	Response
Juel, Jeff	Vegetation is described relative to the processes that shaped its evolution and in terms of its attributes, composition, and structure. Describing trends and the wide range of vegetation conditions that result from historical processes provides the context to evaluate current conditions. Desired stand conditions are based on the function of ecological processes as affected by management activities.	McRae et al. 2001 provides a comparative analysis of the ecological impacts of forest harvesting, mostly clearcutting and wildfire on forest ecosystems. McRae et al. 2001 has coined a term "emulation silviculture" to describe silvicultural activities designed to mimic wildfire associated with intensive forest practices in Canada. The document compares spatially how logging and fire differ. As stated on page 3-38 of the DEIS, "It is important to ensure that potential treatments will result in a healthy and sustainable condition in the forest ecossytem. The desired future condition includes forest structures, composition, and process that would have been present historically. Fire plays an important role in the sustainability of these ecosytems. Prescribing timber harvest or understory thinning in advance of prescribed fire allows fire to be reintroduced into the project area without causing high levels of tree mortality." Timber harvest and non commercial thiining is being prescibed in advance of prescribed fire to reduce tree mortality, not replace it. The DEIS further goes on to state the importance of prescribed fire "to reduce the vulnerability of the forest to possible severe and undesirable effects from wildfire." Alternatives in the DEIS have analyzed commercial harvest and non commercial thinning followed by prescibed fire, and precribed fire only.

Author(s)	Comment	Response
Juel, Jeff	(3-4.) The philosophy driving the Forest Service's strategy to "move toward" and replicate historic vegetative conditions (basically, replace natural processes with mechanical treatments) is that emulation of the results of disturbance processes would conserve biological diversity. McRae et al. 2001 provide a scientific review summarizing empirical evidence that illustrates several significant differences between logging and wildfire:	McRae et al. 2001 provides a comparative analysis of the ecological impacts of forest harvesting, mostly clearcutting and wildfire on forest ecosystems. McRae et al. 2001 has coined a term "emulation silviculture" to describe silvicultural activities designed to mimic wildfire associated with intensive forest practices in Canada. The document compares spatially how logging and fire differ. As stated on page 3-38 of the DEIS, "It is important to ensure that potential treatments will result in a healthy and sustainable condition in the forest ecossytem. The desired future condition includes forest structures, composition, and process that would have been present historically. Fire plays an important role in the sustainability of these ecosytems. Prescribing timber harvest or understory thinning in advance of prescribed fire allows fire to be reintroduced into the project area without causing high levels of tree mortality." Timber harvest and non commercial thiining is being prescibed in advance of prescribed fire to reduce tree mortality, not replace it. The DEIS further goes on to state the importance of prescribed fire "to reduce the vulnerability of the forest to possible severe and undesirable effects from wildfire." Alternatives in the DEIS have analyzed commercial harvest and non commercial thinning followed by prescibed fire, and precribed fire only.

Author(s)	Comment	Response
Juel, Jeff	DCs must be rejected in favor of desired future dynamics in order to be consistent with the best available science. Hessburg and Agee (2003)[...]Sallabanks et al., 2001[...]Noss 2001[...]Hutto, 1995[...]Kauffman, 2004 states[...]Noss and Cooperrider (1994) state:[...]The Environmental Protection Agency (1999)[...]Forest Service researcher Everett (1994) states:[...]Hessburg and Agee 2003[...]Collins and Stephens (2007)	We agree and reconize forest conditons are dynamic and change over time and the desired conditions outlined within the DEIS are dynamic and maintain resiliency across the landscape.
Juel, Jeff	Typically, attempts to control or resist the natural process of fire have been a contributor to deviations from DCs. The DEIS characterizes fire as well as native insects and other natural pathogens as threats to the ecosystem rather than rejuvenating natural processes. It seems to need the obsolete viewpoint in order to justify and prioritize the proposed vegetation manipulations, tacitly for replacing natural processes with "treatments" and "prescriptions." However the scientific support for assuming that ecosystems can be restored or continuously maintained by such manipulative actions is entirely lacking.	Comment is addressed in the DEIS, Ch. 1.3 (Purpose and Need for Action) and 1.7 (Issues).
Juel, Jeff	That last sentence provides a measure of resilience that the DEIS doesn't acknowledge[...]In systems with integrity, the "…capacity for self-repair when perturbed is preserved, and minimal external support for management is needed	Comment is addressed in the DEIS, Ch. 1.3 (Purpose and Need for Action) and 1.7 (Issues).

Author(s)	Comment	Response
Juel, Jeff	The DEIS does not state that the Roadless Rule is a part of the Forest's Regulatory Framework, and therefore it does not demonstrate consistency with the Roadless Rule. Does the Forest consider anything from the Roadless Rule analyses to alter their out-of-date 1970s RARE II evaluations?	Omission of the Roadless Rule was corrected in the FEIS, see section 3.12.2.2. Roadless Characteristics described in Table 3.12-1 Attributes of Wilderness and Roadless Characteristics defined in FSH 1909.12, 72.1 and 36 CFR 294.11 consistent with the Roadless Rule.
Juel, Jeff	The DEIS does not adequately analyze and disclose project impacts on wilderness characteristics of the unroaded areas, and therefore doesn't consider the potential of project activities to reduce likelihood that these areas would be recommended for wilderness under Forest Plan Revision.	Please refer to Section 3.12.4, Environmental Consequences of the FEIS for analysis of the project impacts on wilderness attributes within the roadless expanse by each alternative.
Juel, Jeff	The DEIS considers past management impacts on inventoried roadless areas differently that it does in unroaded areas, which is not logical.	Please refer to Section 3.12.3.2, Roadless Expanse of the FEIS for edits.
Juel, Jeff	The DEIS doesn't even display an easily read map which would allow anyone to evaluate the extent of the unroaded areas.	Figures 3.12-1,2 and 3 in the DEIS show maps of the treatments proposed by alternative relative to the Selway Bitterroot Roadless Area and Unroaded Areas, (unroaded expanse) with the Como Forest Health Project. The unroaded areas are the tan hatched areas adjacent to the Selway Bitterroot Roadless Area shown in brown. We will try to improve the clarity of the maps within the FEIS.
Juel, Jeff	The DEIS does not follow established FS policy on evaluation of roadless boundaries.	See sections 3.12.2.2 and 3.12.3 of the FEIS that covers the applicable laws, regulations and policy that govern the evaluation of roadless boundaries.
Juel, Jeff	The DEIS does not follow established FS policy on evaluation of roadless boundaries.	

Author(s)	Comment	Response
Klingaman, Curt	Thinks it is the right thing to do and the only way to keep our forest healthy is to thin out all bug killed areas.	Not all dead trees will be removed from the project. Dead trees provide benefits to many resources.
Klingaman, Curt	The only healthy forests we have left are our clear cuts and we need to promote logging in the valley.	It is desriable have a mosaic of species, age and size class aross the landscape.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	Proposed timber harvests and fuel reduction along the east face of the Bitterroot Mountains continue to lack full consideration for other resource values in the system, and this proposal further threatens to compromise what little remains of lower elevation forest integrity.[...]Healthy soils, rare plants, cultural features, wildlife, view sheds, old-growth, and wild and scenic qualifying rivers are in jeopardy in this proposal area and throughout the west. If these values are to be seriously incorporated on these lower to mid-elevation slopes, they cannot be viewed as elements to be weighed only after timber harvests are proposed. The process should not begin with a timber cutting proposal and then seek to weigh the impacts on other resources. The role of the Forest Service specialists should not be to try to justify logging proposals envisioned and proposed by agency timber harvest planners and specialists. Rather, natural resource specialists should be in on the ground level in planning proposed projects with long term and sustainable resource protection as the guiding principle.	The purpose and need for this project orginated because the Lake Como Recreation Area and surrounding forest was experiencing a growing mountain pine beetle infestation causing increased ponderosa pine mortality. This high use recreation area recieves about 200,000 vistors annually and provides a full complement of recreation opportunties and the Forest wanted to reduce the potential of added mortality from mountain pine beetle and improve forest resilience by providing treatments resulting in a healthy and sustainable condition in the forest and ecosystem. A resilient forest is one that has the ability to withstand and maintain normal function through natural disturbances such as fire, insects, disease, or climate change and the current condition within the project area is not able to do this. The Como Forest Health project as stated on page 1-6 of the DEIS "responds to the goals outlined in the Bitterroot National Forest Plan of managing timber, big-game forage and winter range habitat, old growth forest, roaded dispersed recreation, maintaining sensitive viewsheds, and riparian habitat (Forest Plan III-3, III-9, III-15, III-22). The Como Forest Health project moves the project area towards desired conditions in the Forest Plan." The ID Team on the Como Forest Health Project is comprised of 16 individuals who specifically specialize in one area such as botany, fisheries, hydroloy, soils, heritatge, transportation, GIS, silviculture, wildlife, fire/fuels, recreation, wilderness/trails, range, NEPA, sale preparation, and scenery/visuals. These Specialists have been in the planning and development of this project and have helped develop alternatives, provided advice and authored the DEIS.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	We are aware that the BNF has already begun and possibly completed marking of the timber sale cutting units for this project. The public has not yet had the opportunity to comment on the project as provided for under NEPA and NFMA. Apparently the BNF has already predetermined the outcome of the project and has made an irretrievable commitment of resources in favor of the proposed action alternatives versus the no action alternative which is a violation of NEPA and NFMA. FOB and AWR will require a full explanation from the BNF as to why this action has been taken before listening to and fully considering citizen input on this project.	The United States Court of Appeals for the 9th Circuit opinion number 07-35044 dated November 6, 2008 has shown that marking timber ahead of a environmental analysis decision is not necessarily an "irretrievable commitment of resources". Section III [3] states: "... the Forest Service's premarking of trees did not irretrievably commit it to a particular course of action. Although the Forest Service undertook preparatory actions in favor of logging, it clearly retained the authority to change course or to alter the plan it was considering implementing."
Miller, Jim Garrity, Michael	The BNF should also be aware that portions of the project area have already been logged in 1993 under the Lick Creek Environmental Assessment. No mention of this earlier timber sale and its potential effects on the currently proposed project can be found in the Como DEIS. The BNF will need to consider cumulative effects from previous logging and road building and must uphold road closures, mitigation measures, and all previous commitments made by the agency under the Lick Creek EA and ROD.	The DEIS, Ch. 3, pp 3-62 to 63 (Past Timber Harvest) describes previous harvest activities / impacts and the implications for current conditions. Table 3.1-8 displays the timber harvest history in the Project Area by decade rather than by specific sale such as the 1993 Lick Creek Sale. The DEIS, Ch. 3.1.3.5 explains that where regeneration harvest has occurred in the past, these sites have regenerated to the desired species and stocking levels from locally adapted seed. The action alternatives continue the next phase of treatments previously implemented to maintain the fuels within their historic ranges and maintain healthy vigorous stands.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	FOB and AWR continue to be perplexed by the Forest Service's desire, with proposed plan amendments, to fall short of its own existing Forest Plan Standards for the BNF. Several Forest Plan standards will not be adhered to in the action alternative. We believe that a project that may require up to four Forest Plan amendments will be in conflict with not only the management direction of the Bitterroot National Forest, but with important natural processes that are fundamental to the ecological integrity of the area[...]The DEIS should have disclosed the current research that is used to justify any Forest Plan amendments. Use of project specific Forest Plan amendments has become routine with Bitterroot National Forest logging projects. The proliferation of such piecemeal amendments, often regarding the same standards, indicates the BNF considers them irrelevant or outdated.	The DEIS, Ch. 1.9 (Site-specific Forest Plan Amendments) contains concise explanations, including research citations, of the reasons for proposing non-significant amendments to the Forest Plan in this project.
Miller, Jim Garrity, Michael	If meeting Forest Plan standards is as irrelevant as indicated, that should be substantiated and analyzed in a forest-wide Forest Plan Amendment. Part of that analysis should include a hard look at resources that have inadvertently been protected under the umbrella of road density limitation standards such as watershed health, including siltation and increased runoff adding to ECA; soils, including cumulative compaction; and sensitive wildlife other than elk. Forest Plan standards can serves as a surrogate for limiting damage to other resources, even if not declared for that purpose in Forest Plan objectives.	Comment is addressed in the Response to Comment #19-4 above.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	There should be at least one alternative that would not require a 'project-specific' Forest Plan amendment. We believe that alternative would invariably be the alternative that best protects forest natural resources in a sustainable manner and would be strongly supported by the public.	In response to comments earlier in the process, the DEIS, Ch. 2-22 examined a possible action alternative without any non-significant Forest Plan amendments. A preliminary analysis of the project area showed that current levels of thermal cover, elk habitat effectiveness (EHE), and old growth do not exist. Though management options exist to improve some of these conditions, they would not meet standards even after project implementation. Forest plan standards for coarse woody debris for some habitat types arehigher than recommended in current research. For these reasons, this alternative was not carried through analysis.
Miller, Jim Garrity, Michael	Need: Where logging is proposed to address any purpose and need regarding fire behavior or beetle activity, we believe the proposal may be arbitrary and capricious due to availability of recent scientific findings that casts doubt on the effectiveness of logging to achieve those purposes and needs.	On page 1-2 the Purpose and Need of the Como Project is to: • Reduce potential mountain pine beetle caused mortality in large diameter ponderosa pine • Reduce fuel loads and maintain historical fire return intervals in the project area • Improve the forest resilience to mountain pine beetle, Douglas-fir beetle, and dwarf mistletoe • Maintain the visual integrity of the larger Lake Como Recreation Area On page 2-3 to 2-14 describes the different treatments for the alternatives. Logging, thinning (commercial/non-commercial) slashing, piling, pile burning and broadcast area are all proposed). Additionally we have in the DEIS in Appendix B "Past, present, and Reasonably Foreseeable projects in the Como Forest Health Project Area" that describe projects such as Lick Creek from 1991. That project was treated with logging activities followed up by thinning, piling, prescribed burning to meet desired condition. It also described additional work to maintain effectiveness of these treatments in 10-20 years hence additional work to be continued in Como Forest health project to maintain effectiveness and a maintenance treatment

Author(s)	Comment	Response
		for those stands. On page 3-81, it is stated that fires older than 8-10+ years are no longer considered viable fuel breaks so some type of treatment other than fire must be considered to get the stands into a condition that slows down fire and lowers fire intensity - hence, logging, slashing, piling and burning is needed to achieve the desired fire behavior. Additionally, on page 3-73 to 3-75 we describe the fire history, fire ecology, and fire return intervals for those areas. Fuels treatment using only fire is not always feasible to achieve the appropriate fire effects. "The objective of fuel treatments is to change fire behavior from crown fire to surface fire, reducing spotting distances and convective and radiant heat. Fire suppression is effective only if fire intensity is reduced to moderate or low intensity surface fire. This level of intensity allows firefighters to extinguish spot fires and allows safe “close-in” engagement. Fuel treatments on wildlands are effective only when adjacent homeowners have well-maintained, fire-safe property and when there are sufficient suppression resources present to extinguish spot fires and surface fire spread. " Murphy et al. 2007 (p. 11). USDA 2007. Murphy, Kathy, Tim Rich, and Tim Sexton An Assessment of Fuel Treatment Effects on Fire Behavior, Suppression Effectiveness, and Structure Ignition on the Angora Fire. R5-TP-025. On page 3-26 to 3-29 of the DEIS in the Silviculture and Forest Management section, it describes the current conditions and references about effects from thinning and its effects on beetle activity. P.7"Fuel treatment longevity depends on a multitude of

Author(s)	Comment	Response
		factors, including site- and stand-specific factors, treatment design and treatment outcome factors, climatic factors, and fuel accumulation factors. •In studies of wildfire severity, treatments ranging in age from 2 to 15 years were effective in changing fire outcomes across the western United States. • Although the evidence is limited, thinning and prescribed burning may be the most effective treatment combination. •There is no “one-size-fits-all” number for fuel treatment longevity local monitoring is essential. •Climate change may impact fuel treatment longevity, but also may make fuel treatments even more essential in the future." http://swfireconsortium.org/wp-content/uploads/2013/10/FINAL_27_ERI_Working_Papers_WEB.pdf
Miller, Jim Garrity, Michael	The perceived need to make another replica attempt to protect Ponderosa pine from mountain pine beetle, at the expense of many other forest resources, needs closer examination. The science is not clear as to how this could be accomplished as there are so many variables to consider. Choosing the even spaced thinning method for all ponderosa habitat is a careless, broad-brush, sterile approach. The result of yet one more thinning project is to further sanitize the forest and remove important ecological niches, many of which are just beginning to develop.	The silvicultural prescriptions for this project are the same as what has been prescribed for other areas on the Bitterroot National Forest, including Hayes Creek, Haacke Claremont, Elk Bed, Larry Bass, Sweeney, Lower West Fork, Trapper Bunkhouse, and Three Saddle timber sales which have been successful with the same types of treatments. Prescribed treatments include but are not limited to, leaving larger trees, reducing ladder fuels, breaking up the homogenous and continous horizontal and vertical structures, and thinning to favor the best trees across all diameter and age classes as stated in the DEIS on page 3-47.
Miller, Jim Garrity, Michael		On page 3-79 of the DEIS it states that 58% of the area (3,259 acres) of the project area are delineated in the WUI (Wildland Urban Interface Zone). The Federal fire policy direction for planning wildfire suppression strategies prioritizes the protection of life above private property and protection natural

Author(s)	Comment	Response
	The perceived need to make the forest more resistant to high intensity fire is also problematic. It is well known that most fuel-reduced landscapes will regrow in a relatively short period of time. Fuel reduction methods have also opened the forest canopy to full sun and intense heat, drying out much of the land and making it more susceptible to earlier season fires than untreated areas. Further, forest thinning methods have little if any effect during intense fire conditions. This has been scientifically documented by Westerling et. al. and others. We experienced this first hand during the Bitterroot fires of 2000 as the fires burned through every vegetative landscape type including clearcuts. Climate is the driver of large scale fires, not fuels. The smaller less intense wildfires that the Forest Service may be able to influence with thinning treatments are the very ones that the forest needs to create forest mosaic and to begin the process of rejuvenation and succession.	resources. The Bitterroot National Forest has no authority to conduct fuel treatments or other wildland fire mitigations on private lands. That responsibility lies with State and Private Forestry and the State of Montana. The Bitter Root RC&D Hazardous Fuels Reduction Program was established in 2001 after catastrophic fires had gripped the Bitterroot Valley for nearly 3 months in 2000. This program offers grant funds on a cost-share basis to private landowners who want to perform hazardous fuel reduction work on their land. The effort is made to work in coordination with areas adjacent to USFS and DNRC hazardous fuels reduction projects, thus broadening the area of treatment impact. Local neighborhoods are also encouraged to work together to create a local microcosm of greater fire protection. In order to make this all happen, many partnerships have been developed with federal, state, local and private organizations who have similar goals. $3,536,604 received in grant funds to the Bitter Root RC&D 3-county area, $2.6 million in grant funds utilized to date. $2.9 million in matching landowner contributions to date. $462,000 in grant funds to support other RC&Ds in Montana. Nearly 5,100 private land acres signed-up. Nearly 4,200 of those acres have treatment completed. 687 private landowners participating. 602 landowners completed treatment plan. 445 project areas hired private contactors. Property owners need to address the "little things" first. NFPA advises property owners to start with the house and work their way out. Having a nonflammable roof covering and assembly adds an enormous safety measure. Keeping roofs and gutters clean and clear of leaves or needles is critical to minimizing ignition from embers. Flammable attachments (e.g., untreated wooden decks) are very vulnerable to ignition and can carry fire to the main structure. Keep flat surfaces clear of debris. Clean out any leaves, needles or stored material that could burn from under decks or porches. During this high fire danger season,

Author(s)	Comment	Response
		remove large potential heat sources such as piles of firewood, spare building materials, vehicles - anything that could catch embers or ignite by flames in the grass needs to be as far away from dwellings as possible. http://www.firewise.org/wildfire-preparedness/be-firewise/home-and-landscape/defensible-space. Dr. Cohen's recommendations are just that - recommendations that private landowners should consider when living in the wildland urban interface zones. Bitterroot RC&D helps state and private land owners shoulder that responsibility but ultimately it a personal decision a person must make. Every fire here on the Bitterroot motivates people to seek out grants and resource programs to reduce fuels on private lands but other issues related to roof composition, siding, that contribute to flammability of structures is solely determined by the land owner or influenced by homeowners associations or cost of insurance policies and fire education programs. The US Forest Service role in the Lake Como project Forest Health Project aims to try and prevent wildfire from entering into the private lands through fuels reduction methods on USFS lands. We delineate a WUI line on our map as a way of showing the path of possible fire travel towards private lands should a wildfire start and try to slow the path of those future fires from getting to the private lands. National Forest supports Cohen's recommendations and State and Private Forestry help to fund those initiatives. http://bitterrootrcd.org/hazardousFuels.htm
Miller, Jim Garrity, Michael	The DEIS states in the summary that Forest Plan standards for old growth will not be met for most management areas. [...] Several Forest Plan standards will not be adhered to in the action alternatives:	Forest Plan standards for old growth will not be met in Management Areas: 1, 3a and 3c in drainage 02a277-1 2, 3a, and 3c in drainage 02a282-3 3a and 3c in drainage 05d276-1 and 2, 3a, and 3c in drainage 05d276-2.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The DEIS states in the summary that Forest Plan standards will not be met for Burn Unit E.	The summary in the DEIS states that standards and guidelines from the Northern Rockies Lynx Management Direction (NRLMD) will not be met due to Burn Unit E, not the Forest Plan. The NRLMD provides management direction that conserves and promotes the recovery of Canada lynx while preserving the overall multiple-use direction in existing Forest Plans. Direction in the NRLMD FEIS ROD applies to mapped lynx habitat on National Forest System land presently occupied by lynx, as defined by the Amended Lynx Conservation Agreement between the Forest Service and USFWS (PF-WILD-035). However, all National Forests are encouraged to consider the direction in the NRLMD FEIS ROD when designing management actions in unoccupied lynx habitat, such as on the BNF, but are not required to follow this direction (USDA Forest Service 2007a). Burn Unit E in Alternatives 2 and 3 do not comply with Standard VEG S6 or Guideline VEG G4, and therefore would not comply with the NRLMD. An explanation of VEG S6 and VEG G4 can be found on page 3-139 of the DEIS. Burn Unit E is not proposed in Alternatives 1 or 4, and so these alternatives do comply with the NRLMD.
Miller, Jim Garrity, Michael	The DEIS states in the summary that Forest Plan standards for Visual Quality Objectives will not be met in alternative 2 and 3.	The scenery analysis for Lake Como FHP identified Alternative 2 and 3 would deviate from Forest Plan standards and require an amendment to the Forest Plan, as stated.
Miller, Jim Garrity, Michael	The DEIS states in the summary that Region 1 soil quality standards for detrimental soil disturbance would be exceeded in alternative 2.	The analysis is intended to provide the decision maker the complete assessment of each alternative's effects on resources. Unit specific modifications have been provided to enable the decision maker to see the full array of effects of the action alternatives and the necessary tradeoffs that would be required to meet the R1 SQS. Selection of an alternative will require the decision to include modifications provided in Table 3.6-13.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The DEIS states in the chapter on Elk that Elk Habitat Effectiveness ratings for third order drainages "would continue to Not meet Forest Plan minimum standards" within the proposed project area and that "Disturbance impacts to elk from motorized vehicle use are expected to increase due to potential illegal use on the newly built roads and tractor line machine (TLM) trails." You also state "reduction in elk security acreage will occur along the west side of the project boundary."	The Elk Habitat Effectiveness (EHE) in the project area will not change from its existing condition under any of the alternatives and because of this, the action alternatives meet the intent of the Forest Plan ROD requirement of maintaining EHE in third order drainages. Changes in the travel status of exisiting roads is beyond the scope of this project, and no new system roads will be built in this project. Disturbance impacts to elk have the potential to temporarily increase due to potential illegal use on the newly built roads and TLM trails until they are rehabed. After these trails and roads have been rehabed, signage, slash, downed logs, earthen humps or berms, and boulders will be used to mitigate the potential of illegal motorized access. Providing elk security is not requirement of the Forest Plan. However, it is included in the elk analysis because security areas are recognized as an important component of elk habitat. As stated on page 3-221 of the DEIS, criteria for elk security areas are defined as: Non-linear polygons of cover that are greater than 250 acres, having more than 40% canopy cover, and located more than one half mile from a road open to motorized use during the rifle hunting season. Reductions in elk security acreage will occur due to a reduction in canopy cover from prescribed fire and commercial harvest to levels below 40%.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The DEIS states in the chapter on pileated woodpeckers that regarding all action alternatives "overall snag density would be reduced, which would reduce the amount of available pileated woodpecker nesting and foraging habitat," which means the reduction in the available amount of flammulated owl nesting habitat, the amount of marten habitat, the amount of nesting habitat for 25% of the forest bird species, etc. The DEIS states in the pileated section "large old trees and large snags are relatively rare components of this area." We find this last quote to be true, which is in direct conflict with your findings that 3,200 acres of the project area are "suitable" habitat.	Suitable habitat for pileated woodpeckers is defined as ponderosa pine or Douglas-fir within habitat type groups A, B, C, and G that is in a mature seral state (mature, saw timber, multi-storied (with two or three levels) or old growth habitat) below 6200 feet in elevation. Standing snags and hollow trees are necessary habitat components for pileated woodpeckers, and are structures making up mature and old growth habitat. The snag section of the DEIS (starting on page 3-111) indicates that the project area is deficient on snag numbers. The statement on page 3-241 of the DEIS "large old trees and large snags are relatively rare components of this area" continues on to discuss in the next sentence that although there are areas that provide suitable nesting habitat, the quality of that habitat is generally poor. The low quality of the suitable habitat is due to the low number of large old trees and large snags.
Miller, Jim Garrity, Michael	The dearth of references disclosing the work over more than a decade by former BNF soils scientist Ken McBride is a glaring omission. His professionalism was recognized by being chosen to lead a regional soil monitoring effort, yet his work here on the BNF is ignored by the DEIS. There are many instances where statements in the DEIS are contradicted by findings from long experience reported by McBride. For example, the DEIS (3-275) generalizes, "The potential for compaction with ground-based equipment on these shallow, coarse textured and high coarse fragment content soils is low to moderate." Yet McBride measured and reported about BNF soils specifically, "Typically, from 30 to 60 percent of a logged unit will have soils that meet Regional criteria for detrimentally	Recent Forest Plan monitoring data reflects that the impacts from logging operations since the departure of Mr. McBride have meet R1 Soil Quality Standards (PF-SOILS-007). Recent monitoring data is the most valid past monitoring efforts are considered however, they followed different methodologies which providing misleading results. In many cases, any soil disturbance was considered detrimental during past soil monitoring, which is not an accurate reflection of soil conditions.

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	damaged soil." The DEIS states, "Detrimental soil disturbances from harvest activities such as skidding, temporary road construction, track line machine trails, skyline yarding, and landing operations are not expected to persist beyond 5-10 years if rehabilitation activities are completed" (p.3-280). Yet McBride reports compaction can last more than 50 years. Regarding summer ground based log skidding, the DEIS (p.3-284) states, "Compaction of mineral soils may occur but is likely to be buffered by the high percentage of coarse fragments in the soils." Compaction is absolutely guaranteed, and this fact should be disclosed. Such a statement is carelessly dismissive of long experience of widespread detrimental soil compaction on the BNF. A dismal picture of legacy soil damage is provided in the DEIS . The DEIS (p.3-296) states, "At the landscape scale, approximately 3,880 acres or 68 percent of the project area has been harvested since the early 1900s (FACTS database)." "Harvest activities that have created long term (>50 years) DSD are primarily the result of past ground-based yarding." "In some cases, subsurface compaction persists through 6 to 12 inches of the soil profile. Natural recovery will continue over time through freeze/thaw cycles and root penetration. Approximately 30% of historic skid trails were determined to have root limiting compaction considered to be detrimental to soil function." Such widespread existing soil damage is problematic, yet the DEIS (p.3-299) discloses, "All Action Alternatives would lead to additional detrimental soil conditions from yarding operations, landing sites, excavated skid trails, and the construction of track-line machine trails and temporary roads." The DEIS states that there are currently only 93 acres of soil disturbance in the project area. That seems unlikely considering the logging, ditching and roading activities of the past, especially the areas cut over by	

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	the Anaconda Company. We find it unscientific and misleading that you do not count logging and canal/ditch roads (present, past, and proposed) as land area with soil disturbance. The roadbeds, road cuts, and the fillslope, add up to some sizeable acreage in the project area. The foundational soil health of the forest should not be sacrificed in order to log more trees for dubious effect on the stated purposes and needs of this project.[...] We note that there has not been a soils problem noted in the field on the Bitterroot Forest since the demoting of your former soils scientist Ken McBride.	
Miller, Jim Garrity, Michael	Apparently there was no soils expert on the ID Team (App E). [...]The soils analysis in the DEIS fails to disclose important available information.	A professional soil scientist completed all field review, analyses, and the discussion of effects on soils for the project. Please see the list of preparers in DEIS Appendix E for information.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The northern boundary for the proposed Como project area is north of Lost Horse Creek along Lost Horse Road. The West Side Project map shows that the southern boundary of that project is the north bank of Lost Horse Creek. This apparent overlap seems counterproductive and confusing. For instance, the gravel pile is being addressed in the Como project, yet the logging of the area around the gravel pile is addressed in the West Side Project. Does this make for double the assessments and work for the overlapping area-the land between the creek and lost Horse Road? This boundary overlap could be an important consideration as it potentially gives the public the false impression that no logging will occur on the north side of the creek for some time, even though the FS intends to log all the land on the north of the creek east of the Lost Horse bridge in the agencies next timber sale called West Side Project.	The northern boundary of the Como project area does not coincide with north edge of any proposed harvest areas. The sale area boundary was drawn along that line so as to include the effects of log hauling along the Lost Horse Road as part of the analysis. Actual harvest unit boundaries fall south of the sale area boundary for the Como project. The ID Team for the Westside Project has not yet developed a proposed action with a map at this time.
Miller, Jim Garrity, Michael	With all of the time and money spent on Goshawk monitoring by the Forest Service in Region 1, the fact that this forest raptor is not even mentioned in your analysis of the Como project constitutes a glaring omission. Regardless of the species' official status, there should be an analysis of existing and past territories. Have nests and territories been documented in the project area? Thinning mature closed canopy stands is generally detrimental to Goshawks nesting habitat and goshawks appear to be declining on the Bitterroot Forest.	Thank you for bringing this to our attention. Omitting goshawks from the DEIS was an unintentional mistake. Goshawks are discussed, along with their known territiory within the project area, in the Forest Land Bird section added to the FEIS. Project activity effects are also discussed in that section.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	White nose fungus is moving west and bats are poorly understood in Montana. Recent surveys by researchers are finding surprising new discoveries of species, and we are just beginning to understand which species are present on the BNF. Snags with cavities are utilized by bat species mentioned in the DEIS. On-the-ground surveying of the project area by FOB did not reveal snags with cavities and/or loose bark common in the project area compared to other low to mid elevation sites on less intensively cut over regions of the Bitterroot National Forest. Most of the pine in the project area is too young to have the qualities desirable for cavity or bark niche creation. Commercial harvest units planned in alt. 2,3,4 will remove vital snag habitat for bats (and other species listed below) unless new forest practices are adopted that make snag retention a higher priority than road and skid trail construction, cable corridor creation and prescribed burning. Logging would have to be kept safely clear of these important large diameter (especially) Ponderosa snags and their denizens. Snags need to take on a higher priority than cutting and removing green trees. If it determined to be unsafe to log around a large diameter snag (>18”), then the area around that tree or group of snags should not be cut. Here again, if the priorities don’t change and move away from timber removal, then snag retention will continue to suffer greatly, as it has for decades under timber sales on the BNF.	OSHA sets safety requirements regarding logging and hazardous trees. These requirements are beyond the control of the Forest Service. Ground-based yarding does not require extensive pulling of cables through the unit therefore the chance of inadvertantly knocking over a snag is decreased. Also many modern ground -based operations use mechanized felling with overhead-protection on the equipment, decreasing the need to fall hazard trees. Cable yarding is being proposed on 179 acres in Alternative 2. Alternatives 3 and 4 are proposing less than that. The rest of the yarding in all alternatives will be done by tractor, diminishing the need of cutting down snags for safety reasons. However, regardless of the type of logging system, it is the decision and responsibility of the logger to determine how to deal with hazard trees. The design features in Table 2.2-5 will ensure retention of snags in all harvest units. Snags will be retained in clumps and will be unevenly distributed across units. The clumping of snags will create better snag habitat and will also create areas where loggers will not have to travel through with machinery or cables, leaving more snags for wildlife.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The keystone role of the pileated woodpecker cannot be overemphasized. Live trees and snags with the presence or potential to be hosts for heart rot are highly prized by wildlife and in fact, vital for their survival. As the DEIS noted, these species include bats, woodpeckers and flammulated owls. Many other species also rely on snags for their nesting or denning including northern flying squirrel, 25% of the forest birds including other owl species, some falcons, some waterfowl species, Vauxes swift, pine marten, fisher, and the tree bases can even be suitable for black bear, and canids in some cases.	Thank you for your comment.
Miller, Jim Garrity, Michael	We could not find a definition of "suitable" and "potential" pileated habitat in the DEIS. A definition for each should be provided	Definitions for both "suitable" and "potential" pileated woodpecker habitat were provided on page 3-238 of the DEIS. Suitable habitat currently has the components and forest structure necessary to meet the needs of pileated woodpeckers. Potential habitat may not currently provide habitat but has the potential to develop into suitable habitat. The Methodology section on page 3-239 in the DEIS describes the components of these two habitat categorizations. Suitable habitat is defined as ponderosa pine or Douglas-fir within habitat type groups A, B, C, and G that is in a mature seral stage (mature, saw timber, multi-stories (with two or three levels) or old growth habitat) below 6200 fee in elevation. Potential habitat is defined as ponderosa pine or Douglas-fir within habitat type groups A, B, C, and G that is in a young seral stage (seedling, sapling, and pole) below 6200 feet in elevation.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The map showing "suitable" and "potential" pileated woodpecker habitat shows that more than half of project area is suitable habitat. We do not disagree that half the project could be used for foraging to some extent, but the critical habitat is nesting habitat, and most of the project area does not support trees old enough to be used for pileated nesting. We therefore believe that the number of acres of suitable pileated habitat has been grossly exaggerated. And regarding potential habitat, we found several areas shown as "potential" that will not support a pileated nest for at least 120 more years. At present, competition for suitable nest and roost trees is evident in the Como project area. Direct competition exists among individuals of the same species and between different species for nest and roost sites, and this scarcity limits population size of cavity nesting species here. Large trees with the attributes to become good wildlife snags and existing snags should be retained as a priority, not just when they are "not in the way" of logging and roading and burning operations.	As stated in the DEIS on page 3-237, the presence of large trees or snags has been reported as being more important that forest age (Kirk and Naylor 1996 Giese and Cuthbert 2003). Both the structure of the stand and the age of trees within the plots were recorded during stand exams that were ultimately used for identifying areas of suitable and potential pileated woodpecker habitat. However, the query used to identify habitat only identifies stands that appear to meet the minimum criteria for providing suitable nesting or foraging habitat for this species and does not rate the habitat in terms of quality. There are trees in the project area that can support pileated nesting, but most likely not at population level that would have been seen in the area 100 years ago. Pileated woodpeckers in the Como project area most likely have larger home ranges than woodpeckers that inhabit habitat with a higher density of large old trees and snags, but the area can still support a population of woodpeckers. Potential habitat means that the area has the components necessary to develop into habitat, there is no time limit associated with the development or a guarantee that it will become suitable habitat. Silvicultural prescriptions will be focusing on leave large trees and snags in the treatment units, and will enhance the growth rate of the retained trees (page 3-45 of the DEIS). Design features will ensure snags are retained post-treatment in densities appropriate for the respective fire group, and snags representing all snag classes will be retained in clumps through the units (page 2-19 of the DEIS).

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The Forest Service does not appear to formally consider cottonwood and aspen as species worthy of evaluating to the point of defining their old-growth parameters. However the agency is increasingly using old-growth cottonwood expanses on private lands of the Bitterroot River Valley and tributaries as important pileated woodpecker habitat in their analysis of viable woodpecker populations and have done so in the Como DEIS. Also woodpecker survey data is used from Lake Como to suggest that there are plenty of pileated woodpeckers in the project area. The Lake Como area is mostly geographically separate from the project area under consideration. Private property land management attitudes in the Bitterroot Valley are increasingly viewing dead and decaying cottonwoods as debris to be cut, piled and burned; sometimes the cottonwoods are removed for "fuel reduction," a practice that is mistakenly applied to riparian areas frequently now. This is in part because the FS sold them the message to reduce fuels.	Alternative 4 contains units of aspen regeneration and recruitment because of their recognized importance to wildlife and ecosystem health. In the **Broader Context and Trends** section of the pileated woodpecker report, cottonwood forests on private land along the Bitterroot River that provide pileated woodpecker habitat were mentioned in order to give a broader view of pileated woodpecker habitat by indicating that in addition to the habitat found on National Forest Land, there is also habitat available on privately owned land. Recognizing the presence of this high quality habitat on private land indicates that the Bitterroot drainage is capable of supporting a larger population of woodpeckers than would be realized if only the habitat on the National Forest was recognized. The analysis and project effects were completed soley considering Forest Service Land. Regional estimates of pileated woodpecker habitat were also done without the inclusion of private land, as stated on the bottom of page 3-240 of the DEIS. Actions done on private property is out of the control of the Forest Service, and is not considered in this analysis. The DEIS was incorrect in stating that the annual survey routes only covered the southern boundary of Lake Como. The survey routes went around the entire lake, and as such, considerable portions of the project area were included in these surveys. Additional observations of pileated woodpeckers at the Lick Creek MAPS banding station were added to the FEIS to provide additional information about the local population of pileated woodpeckers within the project area.
Miller, Jim Garrity, Michael		On page 3-179, the DEIS states "Suitable habitat provides the components and forest structure necessary to meet the needs of flammulated owls, while potential habitat may not currently

Author(s)	Comment	Response
	We did not find a definition of "suitable" and "potential" flammulated owl habitat. Please include a definition of each. The map showing "suitable" and "potential" pileated woodpecker shows that more than half of the project area is suitable habitat. Here again stand exam data is apparently not a sufficient tool for determining what areas are suitable for flammulated owls. These owls have not been found yet in the project area during the breeding season, most likely because there are a variety of deficiencies in the habitat, the obvious one being a lack of old heart-rotted snags. The DEIS states that no flammulated owls were found during surveys in recent years. The FS should produce a map of the areas that were surveyed and the data that was gathered to verify this assertion.	provide habitat but has the potential to develop into suitable habitat". Suitable habitat was delineated as ponderosa pine or Douglas-fir within habitat type groups A, B, C, and G that is in a mature seral stage (mature, saw timber, multi-storied or old growth habitat). Potential habitat was delineated as ponderosa pine or Douglas-fir within habitat type groups A, B, C, and G that is in a young seral stage (seedling, pole, sapling) (DEIS page 3-181). The project biologist is not exactly sure why flammulated owls are not found in the project area, but uninhabited suitable habitat is not unique to the project area. Winters (1974) discussed the idea that flammulated owls are "semi-colonial", meaning they aggregate into territorial clusters but do not comprise colonies. Subsequent authors (internal references in McCallum 1994) have written about finding clusters of owls with large unoccupied spaces in between them. There are two hypotheses regarding this unoccupied habitat - either large areas of suitable habitat are unoccupied (the unsaturated habitat hypothesis), or large areas of seemingly suitable habitat area not in fact suitable (the suboptmal habitat hypothesis) (McCallum 1994). The 'unsaturated habitat' hypothesis is based on the idea that if suitable habitat is unoccupied, the cause is most likely due to the demography of the species and the landscape mosaic of the region. Flammulated owls are intrinsically incapable of rapid population growth due to their small clutch size and un-nomadic habits. Therefore, it is plausible that the species suffered a continental population decline in connection with widespread habitat change in the past century and have not yet re-colonized the suitable, but currently unoccupied habitat that is available on the landscape.

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		The 'suboptimal habitat' hypothesis is based on the idea that not all the habitat that appears to humans to be suitable is in fact suitable by the owl's standards. So, maybe flammulated owls haven't moved back into the suitable habitat identified in the project area after years of habitat change, or perhaps our understanding of suitable habitat may not be detailed enough, and we may have over-estimated the amount of habitat that is present. The DEIS has acknowledged that the flammulated owl habitat in the project area is not the highest quality and while there are large mature trees and large snags in the project area, they are relatively scarce. The preferred (that we know of) habitat for flammulated owls is old growth ponderosa pine forests, and it is well-documented that previous timber harvest in the Como and Lick Creek drainages over the past 100 years has resulted in the removal of large ponderosa pines, large snags, and old growth habitat. Additionally, years of fire supression has allowed Douglas-fir to encroach flammulated owl habitat resulting in higher density stands with smaller diameter trees that lowered owl habitat. A map of the surveyed area within the project area was added to the project file. Reference: McCallum, D. Archibald. 1994. Review of Technical Knowledge: Flammulated Owls *in* Flammulated, Boreal, and Great Gray Owls in the United States: A Technical Conservation Assessment. Edited by Gregory D . Hayward and Jon Verner. 1994. U.S. Forest Service General Technical Report, RM-253. ix + 213 pp.,

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	Western toad and Pacific treefrog are known to breed in the few ponds and ephemeral pools within the project area. The invasive bullfrog has not been found to be present in the project area, which makes these wetlands even more precious. Trampling, and use of machines causes mortality to both young and adults. Efforts to stay well away from treefrog breeding areas (of which there are few on the BNF) would be prudent. Soil compaction reduces good burrowing habitat, decreases diversity, and causes burrow collapse. The proposal to manage aspen stands at breeding sites in the project area could cause significant mortalities. Perennially wet areas near ponds with aspen growth are corridors for toadlet travel away from the breeding pools. Proposed roading, burning and harvest in the northwest portion of the project, especially section 18, would cause mortalities as well amphibian habitat change.[...]Entering unit 75 would also have negative effects on the Pacific tree-frogs that live there, (a species seldom documented on the BNF) as well as other amphibians. The listed toads and toadlets would also be vulnerable during the spring and summer respectively, depending on time of logging.	Please see Table 2.2-5: Design Features for the Como Forest Health Project for resource protection measures, including buffer strips, which eliminate ground-based disturbance in wetland and riparian areas and provide additional upland area to improve effectiveness. The timber sale contract also includes additional resource protection with the BMPs listed in Appendix A, which are legally enforceable provisions overseen by the timber sale administrator (TSA). There are no known western toad or pacific treefrog breeding sites within the project area, as stated on page 3-195 of the DEIS and in Maxell's 2004 survey report. The breeding sites in Kramis Pond are considered outside of the project area.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	If fisher is to be considered as a species warranting protection within the project area, more full-length downed trees should be left on site. High quality habitat exists in Rock Creek west of Como Lake and in Lost Horse Creek, largely due to an absence of active management in this area. These areas could be viewed as a desired condition for fisher, and management (or lack of management) that mimics those areas would be beneficial to fisher and marten. Current and past proposals in the analysis area push the land further from fisher/marten preferred landscapes. The best fisher habitat in the entire project area may be in Sec. 18 where logging is proposed in Alternative 4.	Fishers are considered to be a sensitive species which means that the Bitterroot National Forest is directed to implement management practices to ensure that species do not become threatened or endangered, warranting protection, because of Forest Service actions. The fisher habitat in Rock Creek and Lost Horse Creek is high quality, but it is difficult to compare these locations to the project area. Rock Creek and Lost Horse Creek are narrow canyon bottoms composed of thick riparian habitat. The project area is an open, low elevation site composed of riparian stringers between ponderosa pine and Douglas-fire covered foothills. A comparision of how these habitat are managed is inappropriate, although snapshots of the Rock Creek and Lost Horse Creek habitat components can used as an example of the desired condition of high quality fisher habitat. The best fisher habitat in the project area is most likely in Sections 13, 25 and 30. The riparian and old growth habitats in these sections provide resting and denning structures that fishers rely upon and the small mammal habitat that fishers forage in. In all of the action alternatives, commerical harvest is proposed in these sections, but there will be no logging in the riparian habitat. In Alternative 4, there will be no logging in old growth habitat either. The DEIS acknowledges that the proposed treatments will reduce the amount of denning and resting structures and foraging habitat in the treatment units, and has snag retention and coarse woody debris design features to ensure adequate levels of these habitat components (including full-length downed trees) will be retained.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	The DEIS notes that the proposed project will further decrease snag numbers, structural diversity, dry out the forest floor and logs, and reduce prey species to the woodpecker. This has already occurred on hundreds if not thousands of acres on the BNF. Denning, roosting and foraging sites continue to decline on the BNF with the exception of bark beetle foraging sites.	Denning, roosting and foraging sites for woodpeckers will continue to be created, recruited and retained through ecological processes including insect infestations, forest succession, disease, fire, and flooding on the hundreds of thousands of acres of the Bitterroot National Forest where commercial harvesting is restricted.
Miller, Jim Garrity, Michael	On page 3-107, bottom paragraph, we note that "most" stands received stand exam plots that would determine if they contained old growth. The DEIS should indicate which stands/units did not have stand exams performed on them, and particularly, those that were described as having a "reasonable canopy." Although alternative 4 removes the least biomass and does not enter "verified" old growth, the alternative does promote experimental "aspen release" in sensitive areas and continued new road and machine trail construction. We are opposed to the aspen release and any new roads/ machine trails construction, including "temporary roads." Small groves of old growth will not have the necessary protection in any of the action alternatives as the DEIS claims to not recognize areas of old growth less than 5 acres in one part of the report, yet in another part of the report it is mentioned that areas of less than 40 acres may not be considered old growth. We believe there should be a size cap for trees removed from the Como FHP of 18 inches dbh	The statement on page 3-107 that 'most' stands received stand exams was incorrect. It has now been updated to reflect what actually occurred on the ground. Exams were completed for all commercial treatment units.
Miller, Jim Garrity, Michael		As discussed in Green et al., Region 1 follows the Region 4 (Hamilton 1993) definitions for old growth aspen and old growth cottonwood. For an aspen stand to be considered old

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	Releasing" of Aspen is discussed in Alternative 4. Releasing of aspen on the BNF has been attempted with varying success. This is not a well understood practice on the BNF and can often result in the removal of healthy conifers, soil compaction, weed spread, skid trails, and spread of root disease without an increase of aspen stems. Heavy-handed aspen promotion has failed to produce more aspen in many cases	growth according to Hamilton (1993), the stand must: be 100-plus years old, contain trees greater than 12 inches in diameter, and range from 10 trees per acre on dry sites to 20 trees per acre on the more mesic environments. Additionally, these large diameter trees must dominate a canopy of smaller diameter trees that may overtop clumped or uniformly distributed seedling and sapling size. Regional Forest Health Protection specialists visited Unit 75 on a field trip on May 1, 2013. As documented in the trip report, the stand is 80-years old (Jackson, et al. 2013). The report also states that this stand is "a prime example of a stand that will continue to deteriorate without managing conifer ingrowth and/or implementing some form of intervention/disturbance to stimulate sucker development. In other parts of the region, small acreages of aspen regeneration have been unsuccessful due to wildlife browse. Therefore, treating large areas and well-planned placement of browse barriers should increase success" (Jackson, et al. 2013). The aspen treatment in Unit 75 will include the non-commercial felling of conifers up to 20 inches in dbh. Large diameter conifers (20+ dbh) in the stand will be girdled and remain onsite for wildlife habitat. Effects of treatments on Lost Horse Creek are disclosed in the hydrology and fisheries sections of the DEIS. This aspen treatment is not experiemental or a gamble, the Forest has sucessfully treated aspen in other projects including Larry-Bass, Trapper Bunkhouse, Fraser and Andrew Waugh. Monitoring reports from these treatments have been added to the project file. Unit 70 is composed primarily of aspen with a limited number of black cottonwood shoots included in the wetter areas.

Author(s)	Comment	Response
		Regardless, recommended treatments in the research literature for the two species are the same. There is no old growth aspen or cottonwood in the project area, and therefore, these topics do not need to be discussed in the document. Retaining all aspen and cottonwood in the project area would only ensure their presence in the short term. The treatments in Alternative 4 are designed with the intent of enhancing the stands that are currently present in the project area so they are sustainable into the future. References: Hamilton, R. 1993. Characteristics of Old-Growth Forests in the Intermountain Region. USDA Forest Service. Jackson, M., Lockman, B., and Sturdevant, N. (2013). Forest Disease and Insect Assessment in Lick Creek and Lost Horse Creek Drainages - Bitterroot National Forest. Forest Health Protection Missoula Field Office Trip Report (MFO-TR-13-02).
Miller, Jim Garrity, Michael	We agree that more aspen and cottonwood on the landscape would be a good thing, but we feel natural regeneration of aspen is already taking place at an increased rate beginning with the fires of 2000 up to the present time. Aspen sprouting from burned lands often grows in a different, more open spreading form than aspen that has sprouted with competition for sunlight.	Yes, we agree the amount of aspen regeneration from the fires of 2000 is increasing, however the Forest Plan does not allow for unplanned ignition without suppression so aspen regeneration following fire is unlikely in this area. Additionally, in this project area there is a deficiency of age classes of aspen and aspen is no longer the seral dominant as conifers encroachment is taking place which is why treatment is proposed.
Miller, Jim Garrity, Michael		As discussed in Green et al., Region 1 follows the Region 4 (Hamilton 1993) definitions for old growth aspen and old growth cottonwood. For an aspen stand to be considered old growth according to Hamilton (1993), the stand must: be 100-plus years old, contain trees greater than 12 inches in diameter, and range from 10 trees per acre on dry sites to 20

Author(s)	Comment	Response
	The aspen growing within parts of the Como project area are very tall and of large diameter. Trees are >50 years old in places and therefore qualify as old-growth aspen. This is a category ignored by the FS old-growth definitions. The Bitterroot National Forest also does not recognize old-growth cottonwood in any formal way. The aspen in release unit 75 is of special concern. This is a stand of old-growth aspen with special attributes desirable to the keystone species pileated woodpecker and most other cavity nesters. This area is also very close to Lost Horse Creek (which is eligible for wild-and-scenic-designation). Logging and road-building further upstream on the south side of this drainage is incompatible with retaining more important ecological functions. Gambling on your ability to coax more aspen to grow should be carried out in areas of less ecological significance. Aspen unit 75 is not the right venue for experimentation, nor are groves of cottonwood that make up most of unit 70.[...]Old growth aspen and cottonwood are not specifically addressed, or even recognized in the report. All aspen and cottonwood should be retained.	trees per acre on the more mesic environments. Additionally, these large diameter trees must dominate a canopy of smaller diameter trees that may overtop clumped or uniformly distributed seedling and sapling size. Regional Forest Health Protection specialists visited Unit 75 on a field trip on May 1, 2013. As documented in the trip report, the stand is 80-years old (Jackson, et al. 2013). The report also states that this stand is "a prime example of a stand that will continue to deteriorate without managing conifer ingrowth and/or implementing some form of intervention/disturbance to stimulate sucker development. In other parts of the region, small acreages of aspen regeneration have been unsuccessful due to wildlife browse. Therefore, treating large areas and well-planned placement of browse barriers should increase success" (Jackson, et al. 2013). The aspen treatment in Unit 75 will include the non-commercial felling of conifers up to 20 inches in dbh. Large diameter conifers (20+ dbh) in the stand will be girdled and remain onsite for wildlife habitat. Effects of treatments on Lost Horse Creek are disclosed in the hydrology and fisheries sections of the DEIS. This aspen treatment is not experiemental or a gamble, the Forest has sucessfully treated aspen in other projects including Larry-Bass, Trapper Bunkhouse, Fraser and Andrew Waugh. Monitoring reports from these treatments have been added to the project file. Unit 70 is composed primarily of aspen with a limited number of black cottonwood shoots included in the wetter areas. Regardless, recommended treatments in the research literature for the two species are the same. There is no old growth aspen or cottonwood in the project area, and therefore,

Author(s)	Comment	Response
		these topics do not need to be discussed in the document. Retaining all aspen and cottonwood in the project area would only ensure their presence in the short term. The treatments in Alternative 4 are designed with the intent of enhancing the stands that are currently present in the project area so they are sustainable into the future. References: Hamilton, R. 1993. Characteristics of Old-Growth Forests in the Intermountain Region. USDA Forest Service. Jackson, M., Lockman, B., and Sturdevant, N. (2013). Forest Disease and Insect Assessment in Lick Creek and Lost Horse Creek Drainages - Bitterroot National Forest. Forest Health Protection Missoula Field Office Trip Report (MFO-TR-13-02).
Miller, Jim Garrity, Michael	Within proposed aspen release patches, the distance beyond the live aspen where conifers would be slated for falling and skidding, falling and left on the ground, or girdled, is not identified in the DEIS.	On page 3-65 of the DEIS in Alternative 4 it states " to improve exsisting aspen stands in units 70,73, 74, and 75 by featuring aspen and removing conifers within the clones and 50 feet outside the clones"
Miller, Jim Garrity, Michael	The map provided in the EIS shows aspen area number 70 to be below (north of) the Lost Horse Feeder Canal. The report contained in the DEIS states that it is upslope from the canal. Observations on our field trip indicate that the trees in area 70 were mostly cottonwoods, not aspen.	
Miller, Jim Garrity, Michael		We pursued additional information as suggested in the comment and we used The Fire Effects Information System (FEIS) database. FEIS is an online collection of reviews of the scientific literature about fire effects on plants and animals and

Author(s)	Comment	Response
	As mentioned in our scoping letter, we are not convinced that sprouting cottonwoods are a desirable outcome as opposed to cottonwood regeneration that is the result of seed germination on bare ground. The BNF should provide literature citations to back up its plans to sprout cottonwood. Further, the DEIS simply stops mentioning the word cottonwood in most of the document except for a reference in the fisheries section.	about fire regimes of plant communities in the United States. FEIS reviews are based on thorough literature searches, often supplemented with insights from field scientists and managers. FEIS provides reviews that are efficient to use, thoroughly documented, and defensible. Approximately 15 to 30 new or revised reviews are published in FEIS each year. Species reviews are also within the database and include information on plant, lichen, and wildlife species' life history, ecology, and relationship to fire. They are available for more than 1,200 species occurring throughout the United States. We found additional information regarding botantical and ecological characteristics of black cottonwood (Populus balsamifera) within FEIS. There are two regeneration processes in which black cottonwood can regenerate through sexual and asexual methods. Seeding is a common in plants which colonize disturbed sites but seedling establishment mortality is very high because of specific mositure requirements after germination (Pregitzer and Friend, 1996). Also, the seeds have little endosperm and optimal sunlight and mositure are required early in establishment that is why seedling establishment in exsisting vegetation is very low (Rood et al. 1998). Cottonwood recruitment is commonly asexual, via root suckering, coppice sprouting, or cladoptsis (the physiological abscission of twigs with leaves still attached). (Agee, 1988 Braatne et al. 1996 Eckenwalder, 1996 Haeussler et al. 1990).The means of regeneration depends on site characteristics and whether or not black cottonwood is already present. Cottonwood is a minor component in the project area and is

Author(s)	Comment	Response
		treated in a consistent method like aspen if found in the aspen units.
Miller, Jim Garrity, Michael		The only areas in which trees will be girdled are in the aspen treatment units. These trees will be girdled in order to enhance the growing conditions for the aspen clones, not for snag creation. Snags that are created from this treatment will be a secondary benefit and will be left onsite. Girdled trees will not be included during post-treatment snag monitoring.
	Regarding girdling of trees for aspen release: As girdling is one of the proposed methods for dealing with shade producing conifers on the perimeter of aspen stands we feel it is important to mention the practice here. We are opposed to any tree girdling where said tree is then counted in any way as a formal wildlife tree or snag or where it could be counted as a tree left standing for wildlife. The reason for this is partly because girdled trees become characteristically poor trees for use by wildlife. Unlike a tree girdled by bark beetles, girdling by foresters creates a dry, hard, slow to decay tree that is largely ignored by insects, and cavity nesters. Girdled trees of particularly large size, over 24" in diameter, may be considered as a possible wildlife leave tree if they are larger than most other trees of the same species in the unit, or if they contain heart rot, but should never be "traded" for an old, large ponderosa with heart rot.	
Miller, Jim Garrity, Michael		The fireline fuel break would be constructed with hand fireline and chainsaw. There is an old dozer line on the west side of Burn Unit E from the Rock Creek fire from 1988 but we had no intention of using a bull dozer to clear the fireline -- it would be by handline construction by the local fire crew(s) - some chaninsaw work would be used to clear brush from the area we would want the handline. As for the mistletoe discussion if you refer to p. 3-24 to 3-25 of the DEIS (Silviculture and Forest Management) there are recommendations for girdling of trees that come from Forest

Author(s)	Comment	Response
	We oppose the burning of Unit E for the following reasons. 1. Its large size, nearly a mile square. 2. Unit E is mostly in unroaded lands. 3. It will burn acreage in inventoried roadless lands. 4. The DEIS proposes cutting a 2 mile long by 20 foot wide swath/fire break through roadless and inventoried roadless lands as well through some designated lynx habitat. The DEIS is not clear as to how the swath/firebreak would be created. We are strongly opposed to the creation of this swath/firebreak and the possible use of a dozer would create yet another egregious ecological scar on the forest landscape. 5. Unit E would not comply with standard VEG S6 or guideline VEG G4 of the Lynx Management Direction. 6. The Forest Service track record of useful prescribed burns in this area is very poor.[...] Regarding girdling of trees for diminishment of mistletoe: Mistletoe species in Western Montana are native and provide food, shelter and nesting sites for a variety of animals. Mistletoe is a natural part of the ecosystem. Plans for girdling some trees with mistletoe is described in the DEIS. Though we prefer girdled trees to be left standing on site, we are opposed to girdled trees being counted in any way as a formal wildlife tree or snag, or where it could be counted as a tree left standing for wildlife (with a few exceptions mentioned above). If the area in question is deficient in large diameter natural snags, it should be noted, and compensated for elsewhere in the project.	Health Protection and when that could be used but in the DEIS alternatives we are not proposing any girdling at this time. The only areas in which trees will be girdled are in the aspen treatment units. These trees will be girdled in order to enhance the growing conditions for the aspen clones, not for snag creation. Snags that are recruited from this treatment will be a secondary benefit and will be left onsite. Girdled trees will not be included during post-treatment snag monitoring. Climate Change Mixed conifer forests are likely to continue to change during the 21st century. On average, the climate in mixed conifer forests is likely to be warmer and drier by the end of the 21st century than it was during the 20th century, with warmer spring and summer temperatures, reduced snowpack and earlier snowmelts, and longer, drier summer fire seasons (Westerling et al. 2006, IPCC 2007, Dominguez et al. 2010). Three lines of evidence predict that warming and drying conditions in mixed conifer forests are likely to cause increased fire activity: reconstructions of fire and climate in the past (Swetnam 1993, Frechette and Meyer 2009), trends over the last few decades (Westerling et al. 2006), and predictive models (Westerling and Bryant 2008). Other predicted effects of a warmer, drier climate include reduced growth and increased mortality in mixed conifer forests (van Mantgem and Stephenson 2007, van Mantgem et al. 2009). For 31Fuels Treatment for Mixed Conifer Forests example, modeling predicts declines in stem volume growth in Sierran mixed conifer due to increased summer temperatures (Battles et al. 2008). A warming climate and altered precipitation regimes will cause other ecosystem changes, such as increased success for bark beetles (Bentz et

Author(s)	Comment	Response
		al. 2010). p. 31 "Comprehensive Fuels Treatment Practices Guide for Mixed Conifer Forests: Southern Rockies, CA and the Southwest
Miller, Jim Garrity, Michael	Weed spread is a big concern of this project. As mentioned in your draft, weeds and weed seedbed will increase in density in some areas and in extant through all units entered. On page 3-371 of the fisheries section, regarding logging in/near aspen it is stated, "… the deciduous stands of unit 74 would be accessed via a skid trail that lies between two wet areas. Use of the corridor would be limited to dry or frozen periods." We are opposed to entering areas that risk so much soil damage. Similar promises (like: operators will run machines over ground only when it is frozen) were made about skid trails or other machine trails in the Larry/Bass project. These promises were not kept and resultant soil disturbance and weed spread were way beyond your expectations and guidelines. Larry/Bass now has many more weed problems as the result of your recent cutting and burning activities there.	If herbicides are used to treat noxious weeds, the stream or edge of the sub-irrigated land will be buffered the distance appropriate to the particular herbicide. For example, if picloram is chosen, the buffer would be 50 feet from surface water or the edge of the sub-irrigated land, whichever is the greater distance from live water (ROD-3). Invasive plants are continuing to be monitored and treated on the Larry Bass Project, as will any invasive species in the Como FHP project. Roadsides and interior invasive plant populations are surveyed and monitored on a rotation by invasive plant specialists on a regular schedule.
Miller, Jim Garrity, Michael	Regarding leafy spurge: On page 3-404 you state that the "The treatment area will be monitored up to 10 years or more." That translates to anywhere from zero to ten years of monitoring.	The populations of leafy spurge will be treated and monitored to ensure that new plants or populations are not coming up and that the treatments are successul. The population sites will continue to be monitored even after the plants are gone to make sure the plants are eradicated and to ensure that no viable seed has germinated in or near the area.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	Regarding weeds in general the DEIS states: "The infested units have a high risk of spread when heavy equipment moves through them." And "tractor ground can displace up to 15% of the soil within a unit, therefore it is expected that 15% or less of the soil within a unit would become infested with invasive plant species…." The DEIS fails to state whether the Forest Service has a grazing allotment leased within the project area. There is mention of cattle grazing in the area in the discussion of rare plants but no information about how long grazing has been occurring. This is important information that should have been disclosed. Grazing is a major contributing factor for weed introduction and spread and greatly reduces the ability of native plants to compete.	Within the project area the grazing has met the forest plan standard and falls within the allowable limits. Documentation is in the project file showing the compliance record with Forest Plan standards.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	However FOB and AWR cannot support Alternative 4 in its present form for the following reasons. 1. It still proposes new road construction and machine trails. 2. It plans to build new road in the Wild and Scenic eligible corridor. 3. It promotes experimental aspen release in more than one grove. 4. Alt. 4 proposes to thin 1,352 acres of ponderosa, which is not significantly less than your most heavy-handed proposal (alt.2), which would thin 1,393 acres. 5. Alt. 4 enters the eligible Lost Horse Creek Wild and Scenic eligible area to log and try to promote aspen. 6. Alt. 4 proposes to log and/or burn in unroaded areas including units 50, and parts of 8, 49 and also unit A and C. [...] Of the action alternatives it appears that Alternative 4 would have less negative effects, except for the glaring fact that it proposes new road and heavy equipment construction.	Thank you for your comment.
Miller, Jim Garrity, Michael	You display in Fig. 2.2-1 a road in the SW ¼ of section 30 as an "undetermined road" open year round, #13231. This road is unused and the road that accesses it has a seasonal closure	Road 13231 has a physical barrier in-place, and does not have motorized use at this time. The map in the DEIS 1 incorrectly identified this as an open undetermined road. This road will remain closed to motorized vehicles, but has been identified as needed for future forest management, and the intent fo this project is to return road 13231 to National Forest System of Roads.
Miller, Jim Garrity, Michael	The map key for fig. 2.2-1 has a category (yellow road symbol) for "FS roads with seasonal closures." The yellow does not show up on the map to the point of readability.	This map was revised for the FEIS.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	Road 13290 is shown as gated but the gate is ineffective.	Road 13290 is a gated road on National Forest Land. The use behind this gate is Illegal. This type of illegal access around FS gates is a common problem on National Forest Lands. Law Enforment Officers and the Bitterroot National Forest OHV Ranger montitor these areas of concern.
Miller, Jim Garrity, Michael	Page one of the Summary states that Alternative #2 will produce a (PNV) of $47,000. This seems unlikely.	The Present Net Value calculation for each alternative is described in the DEIS and is found under Section 3.15 Economics. The subsection describing Present Net Value (PNV) begins on page 3-472. The PNV for alternative 2, not including restoration activity expenditures, is $47,000.
Miller, Jim Garrity, Michael	Table on page 3-247 and 3-248 is not included in list of tables and figures.	The information mentioned in the comment is not presented or listed as a formal table. It summarizes the conclusions of the preceeding narrative in a tabular form. It does not have a table heading.
Miller, Jim Garrity, Michael	Table 3.3-41 is on page 3-242.	The comment refers to a formatting issue. There will be a new Table of Contents in the FEIS.
Miller, Jim Garrity, Michael	Figures 3.3-25 through 3.3-33 are on different pages than stated.	There will be a new Table of Contents in the FEIS.
Miller, Jim Garrity, Michael	Page 1-6, Last bullet point needs rewrite.	The bullet point was rewritten in the FEIS.
Miller, Jim Garrity, Michael	Fisher Maps on page 3-173 have mislabeled keys/color on one or more of the maps.	This has been updated in the FEIS, thank you for bringing this to our attention.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	Page 3-233 bottom. You state, "The .67 miles of proposed new system road would not increase road density because they would be closed at the end of the timber sale." We do not agree with this thinking.	
Miller, Jim Garrity, Michael	Regarding leafy spurge: The document states "leafy spurge population will be monitored /treated for up to 10 years." That translates to anywhere from zero to ten years of monitoring.	The populations of leafy spurge will be treated and monitored to ensure that new plants or populations are not coming up and that the treatments are successul. The population sites will continue to be monitored even after the plants are gone to make sure the plants are eradicated and to ensure that no viable seed has germinated in or near the area.
Miller, Jim Garrity, Michael	Use of the word "issues" is overused, vague, and appears to have three different meanings in the draft.	Thank you for your comment.
Miller, Jim Garrity, Michael	Page 3-361, in the Fisheries section under Cumulative Effects heading, paragraph 8 ends with an editing comment in bold type "Error! Reference source not found." It is not clear which areas are included in the cumulative effects analysis.	Thank you for your comment.

Author(s)	Comment	Response
Miller, Jim Garrity, Michael	We believe that the Bitterroot National Forest has genuine concern for keeping mature Ponderosa Pine growing into perpetuity within the proposed Como project area. However the strong desire to thin all of the mature ponderosa stands that can be reached, and to thin to such an extremely low stem density is an imprudent attempt to stop bark beetle attacks. The science is conflicted as to whether thinning will help stop bark beetle proliferation. The best available science now states that no matter how wide the tree spacing, bark beetles will often hit pines when beetle numbers are unusually high. If the beetles do take most of the pines we question whether there will be enough Douglas fir left in the area to still have a forest. We have also observed that the result of many Forest Service restoration projects, especially those that involve commercial logging, is a landscape that more closely resembles a wood lot rather than a forest ecosystem. A forest is more than trees. It is a complex mosaic of grasses, forbs, shrubs, lichens and mosses, soils and trees that our treasured wildlife requires for food, cover, and to raise their young. We very much look forward to seeing the Forest Service further develop and select an alternative that will result in an ecosystem that sustains these needs and meets its own Forest Plan standards.	The Como Forest Health project area is approximately 5, 711 acres. Within the DEIS there are 3 action alternatives as well as a no Action alternative. The most acreage of commercial harvest is Alternative 2 which harvests 1, 476 acres or approximately 25.8% of the project area. Alternative 4 would commercially harvest 1, 117 acres or19.5% of the project area. The action alternatives treat approximately a quarter of the available acreage and not all the mature pine is proposed for treatment. On pages 3-26 -3-28 of the DEIS is a section on mountain pine beetle including hazard criteria in ponderosa pine with desired stand attributes to reduce mountain pine beetle and information regarding treatment size and effectiveness from various authors. Schmid and Mata (2005) discuss in their article a single stand or a few stands within an unmanaged landscape may not provide long-term reduction of mountain pine beetle caused tree mortality in the cut stands. They suggest that reducing long-term mortality may occur when a sufficient area is managed across the landscape. Pages 3-35 - 3-39 state desired conditions within VRUs for vegetation, fire/fuels, ecosytem resiliency and habitat features ensuring a healthy and sustainable condition in the forest and ecosystem.
Nelson, Dan	We feel that alternative # 2 would be the best for all concerned.	Comment will be taken into consideration by the Deciding Official.

Author(s)	Comment	Response
Public, Jean	FROM MY RESEARCH, I DO NOT BELIEVE THAT MANKIND HAS TO SET INTERVALS OF FIRE. IT IS CLEAR THAT NATURE DOES THAT BY ITSELF AND WE SHOULD RESPECT THAT.	No research is cited. While it is true that fire is a natural force on the landscape, the comment author does not account for forest conditions and uses in and around the Como Forest Health project area.
Public, Jean	THE FACT THAT WITH EXTREME WEATHER EVENTS OF EXTREME RAIN, EXTREME SNOW, EXTREME DROUGHT, IT IS CLEAR THAT TREES AND VEGETATION HAVE ENOUGH TO CONTEND WITH WITHOUT HAVING MANKIND ASSAULT IT AS WELL.	Thinning lowers the forests' vulnerabilities to drought. It improves root growth on remaining trrees that improves access to ground water storage during droughts (Amato et al. 2013). Thinning also changes growth-climate relationships by reducing the sensitivity of forest to growing season precipitation (Amato et al. 2013). Amato, Anthony w., John R. Bradford, Shawn Fraver, and Brian Palik. 2013. Effects of thinning on drought vulnerability and climate response in north temperate forest ecosystems. Ecological Applications Vol. 23, No. 8 pgs. 1735-1742.
Public, Jean	THE FOREST SERVICE EMPLOYEES WANT TO MAKE THEMSELVES FEEL USEFUL AND CONTINUE GETTING THEIR HIGH SALARIES AND BENEFITS AND WANT WORK, SO THEY WILL MAKE IT SEEM MUCH WORSE THAN IT IS. FOR THEIR JOBS TO CONTINUE. THEY HAVE A VESTED INTEREST IN MAKING WORK FOR THEMSELVES TO CONTINUE.	The Purpose and Need for Action, described in Section 1.3 of the DEIS, is consistent with Forest Service management goals.

Author(s)	Comment	Response
Public, Jean	THE FS DROWNING AREAS IN COMPLETE AND TOTAL HERBICIDES, PESTICIDES, ACARICIDES AND THE HORROF OF THE TOXICITY OF THOSE CHEMICALS IS ALSO AN ASSAULT ON OUR FORESTS. USDA JUST APPROVED A DERIVATION OIF AGENT ORANGE FOR USE, WHICH THEN IS IN OUR AIR. THERE ARE 80,000 TOXIC CHEMICALS APPROVED FOR USE IN THE USA AND NOBODY HAS DONE ANY STUDIES ON THEIR COMBINATIONS WHICH CAN BE EVEN MORE DEADLY.	All approved herbicides will follow the label for safety and comply with the EPA. Treatment of noxious weeds in the Como FHP project area will comply with the Noxious Weed Treatment Project ROD (2003). The use of herbicides in the Como FHP Project was analyzed and approved in the Noxious Weed Treatment Project FEIS and ROD (2003). Applying a decision does not re-open it to litigation. Herbicide applicators and Forest Service personnel follow current EPA and OSHA safety regulations, and manufacturer label direction when they apply and supervise the application of herbicides. The Forest uses job hazard analyses to identify and mitigate risks to applicators and the environment in the implementation phase of chemical weed control.
Public, Jean	IN ADDITION, MONTANA HAS BEEN GIVING LEASES FOR GAS WELLS AND MINES AND SO MANY OTHER TOXIC EFFECTS ON THIS NEARBY HABITAT AND GRAZING BY ROBBER BARON CATTLE RANCHERS FOR THEIR PROFIT AND DESTRUCTION OF OUR LANDS, SO THAT IT IS A MIRACLE ANYTHING IS STILL ALIVE. THE ASSAULT EFFECTS ARE TREMENDOUS.	There are currently no leases for or proposals to develop gas wells and mines within the project area. The effects of cattle grazing within the project area is addressed in various reports in Chapter 3 of the DEIS.

Author(s)	Comment	Response
Public, Jean	3-16 - FS HAS ALREADY DENUDED THE AREA IMMENSELY. STOP ALLOWING SO MANY DEVELOIPMENTS IN OUR FOREST LANDS. RAVALLI COUNTY HAS THE RESPONSIBILITY TO ZONE SO THAT HOUSES ARE NOT RIGHT ON THE FOREST LINE. RAVALLI COUINTY CAN USE THEIR LANDS TO ZONE FOR NATURE PARKS ON THE BOUNDARIES OF THE COUNTRY FOR A BRAKE. RAVALLI HAS A DUTY TO DO THIS IF THEY BELIEVE FIRE IS AN ISSUE.	County zoning is completely outside the scope of the project and the jurisdiction of the Forest Service.
Public, Jean	THIS IS NO "SILVICULTURAL PLAN". IT IS SIMPLY A GREED FILLED FOR PROFIT LOGGING PLAN FOR THE INSIDERS AT THE FOREST SERVICE. WHO KNOWS WHERE THE MONEY GOES FROM THE LOGGING. NOBODY. IT IS NEVER TOLD TO THE PUBLIC[...] SO WHO WILL GET THE LOGS. CHINA? AND WE GET LITTLE FOR THESE LOGS, SO THIS IS A NO WIN FAILED PROJECT.	The purpose of the project is stated on page 1-2 of the DEIS. Table 3.15-9 shows the estimated revenue of the timber sale. Table 3.15-10 shows the amount of money planned to be spent on restoration activities within the project area. Any remaining receipts would be utilized for future stewardship projects on the forest or returned to the National Treasury. A timber sale feasibility analysis was completed as part of the Economic Analysis. The market appraisal point used for the analysis is in Seeley Lake, MT which is determined to be the closest and most advantageous processing facility for the sawtimber genrated by the timber sale. Also, the Forest Resources Conservation and Shortage Relief Act of 1990 restricts the export of unprocessed logs from federal lands west of the 100th meridian.

Author(s)	Comment	Response
Public, Jean	ELK ARE DYING BECAUS OF CLIMATE CHANGE AND MIDGES AND INSECT PROLIFERATION, ALL OF WHICH WAS PREDICTED IN CLIMATE CHANGE[...]OIL RIGS AND MINING WITH TOXICS IS ALSO A FACTOR. ALSO ANY ELK THAT MAKE IT ARE GUNNED DOWN BY HUNTERS. IF YOU REALLY CARED ABOUT THIS SPECIES, THEY WOULD BE CONSIDERED ENDANGERED AND THE PSYCHOS WITH GUN WOULD BE PROHIBITED FROM KILLING THEM. THE SHEER FOLLY OF LETTING PSYCHO GUN WACKO WILDLIFE MURDERERS CONTINUE TO MURDER A SPECIES THAT IS HAVING TROUBLE IS BEYHOND BELIEF INSANE.	Elk numbers in Montana have dramatically improved since the early 1900s. The population in the project area is well above the 10-year average for the area (page 3-221 of the DEIS). There are no oil rigs or mining involved in this project, and hunting regulations are controlled by the Montana Department of Fish, Wildlife, and Parks. The endangered species status of elk or any other species is controlled by the U.S. Fish and Wildlife Service.
Public, Jean	IF YOU BAN ALL HUNTING AND TRAPPING, THE ELK CAN RECOVER BY THEMSELVES. WHAT THEY NEED IS LESS PUBLIC TRAMPING THROUGH KILLING AND LESS TOXIC CHEMICALS AND LESS OIL RIGS AND MINES AND OTHE RPROFITEERING TAKING PLACE. THE ATTACKS ON THE WILDIFE AND TREES ARE ENORMOUS	Banning hunting and trapping is beyond the scope of this project. The elk population in the Elk Trend Count Unit, which includes the project area, has been above the ten-year average for the past three years (See Table 3.3-31). There are no oil rigs, mines, or intentional killing of animals in this project. While there will most likely be some herbicide spraying on the roadsides and for leafy spurge, the chemicals that would be used were analyzed for health and safety in the Bitterroot National Forest's Noxious Weed Treatment EIS (reference is below). Project effects on wildlife and trees are analyzed in the Wildlife and Silviculture sections, respectively. Reference: USDA Forest Service. 2003a. Final Environmental Impact Statement Noxious Weed Treatment Project. Bitterroot National Forest, Hamilton, MT.

Author(s)	Comment	Response
Public, Jean	SPRAYING TOXIC CHEMICAL HERBICIDES WITHIN 100 FT OF STREAMS IS A VERY STUPID IDEA. TOO CLOSE.	Please see Table 2.2-5: Design Features for the Como Forest Health Project (Invasive Plants, Herbicide Use subheadings) for herbicide use direction.
Public, Jean	IN ADDINTION THE LYNX, WHICH IS ENDANGERED WILL BE DEAD FROM THIS PLAN. THE FACT IS THAT POACHING IS RAMPANT. THOSE GUNS WITH GUNS THAT GO OUT DONT STOP AT KILLING WHAT IS REGULATED. THEY KILL WHATEVE RTHEY WANT. AND THERE IS LITTLE LAW ENFORCEMENT THAT PROSECUTES. THEY ARE ALL IN THE SAME HUNTING CLUB. THE STATE DNR WORKS FOR HUNTERS, NOT FOR THE GENERAL PUBLIC OR FOR THE GOOD OF EARTH. ALL PRESCRIBED BURNING SHOULD BE SHUT DOWN BECAUSE IT IS A HEALTH ISSUE WHERE LUNG CANCER IS PROMOTED, ALLERGIES, ASTHMA, PNUEMONIA, HEART ATTACKS AND STROKES ALSO RESULT FROM ALLOWING PRESCRIBED BURNING. THAT AIR GOES ACROSS THE ENTIRE NATION KILLING AS IT GOES. OWLS ALSO WILL BE KILLED. EVIDENTLY NOBODY AT THE FS HAS READ THE SIXTH EXTINCTION TO BECOME FAMILIAR WITH THE ATTACKS MANKIND IS MAKING ON ALL SPECIES ON EARTH. I GUESS THEY WANT TO CONTINUE TO BE STUPID.	The Canada lynx is considered to be Threatened, not Endangered. Lynx are considered to be a transient species on the Bitterroot National Forest, and the possibility of a lynx being killed by any of the actions proposed in this project is extremely low. The likelihood of an owl being killed by this project is also extremely low. Poaching and hunting regulations are controlled and enforced by the Montana Department of Fish, Wildlife, and Parks. There are very strict smoke and air quality standards that must be met before approval for a prescribed burn is given. These are described in section 3.14.2 of the DEIS. These air quality standards are in place to protect the public and their health.
Raines, Rich	I would like to see that on completion of the Como Forest Health Project these connecting trails have not been ignored and left covered with slash.	The types of recreation activity have been evaluated and it is apparent that the project area gets a fair amount of use by non-motorized recreationists on closed roads and on user-created trails that connect the closed roads with each other. However, these are user-created trails and not designated Forest Service trails. There are no design features in place to protect user-created trails.

Author(s)	Comment	Response
Retzlaff, Owen	Also, Alternative three still offers commercial material to be removed which will contribute positive affects to the local economy with people working in the woods and locals who work at various sawmill and pulp mills	
Retzlaff, Owen	Alternative three still has plenty of prescribed fire which will reduce negative effects from wildfire and will produce more serial grass, shrub species rehabilitating ungulate habitat.	Low severity burning is the type of fire that will produce the most productive and nutrious cereal grasses and shrub species for ungulates. The amount of acres treated by low severity prescribed fire among the action alternatives ranges from 2,766 acres (Alternative 2) to 1,904 acres (Alternative 4) (See Table 2.4-1, page 2-23 of the DEIS). Alternative 3 proposes to treat 2,551 acres with low severity prescribed fire.
Retzlaff, Owen		Thank you for your comment.
	We did notice one error in the DEIS. In the "Rare Plants" portion Table 3.9-1needs to be fixed. The table explains that rare plants found are in bold and Allium columbianum is not bolded but is described in a later table.	
Retzlaff, Owen	It is our opinion that Alternative three be pursued because there is no road work associated with the project. This has the highest probability of making its way through the comment and appeals process.	Thank you for your comment.
Stewart, Robert	The U.S. Department of the Interior has reviewed the Draft Environmental Impact Statement for the Proposed Como Forest Health Project, Ravalli County, MT, and has no comments on the document. The U.S. Fish and Wildlife Service advises that their concerns will be addressed through the Section 7 consultation process. Sincerely,	Comment will be taken into consideration by the Deciding Official.

Author(s)	Comment	Response
Strobel, Philip	Most treatments contemplated under the proposed action (e.g., commercial and non-commercial harvest, thinning, pile burning, treatments for beetle infestation, and road construction) have the potential to adversely impact aquatic resources, including surface and ground waters, wetlands, streams, riparian areas, and their supporting hydrology	Please see the FEIS section 3.7.4, Environmental Effects (Hydrology section) for a description of methods and associated citations. Potential effects summaries are included in Section 3.7 (Summary of Analysis) and 3.7.4.11 (Summary of Effects). Potential sediment effects for Lick Creek are detailed in Table 3.7-7 (Lick Creek Alternative 2 Road Crossing Sediment Estimates). Design Features and Mitigation Measures (page 3.7-23) and Effects Common to All Action Alternatives (section 3.7.4.8, pages 3.7-20 and 3.7-21) both suggest there is potential for only minor, short-term effects from Alternatives 2, 3 or 4.
Strobel, Philip	The Draft EIS includes an extensive Best Management Practices (BMPs) reference and project-specific design criteria proposed to protect aquatic resources (particularly those designed for susceptible Lick Creek subwatershed sediment reduction), including requirements for road construction to avoid wetlands and riparian habitat conservation areas. We recommend expanding the avoidance areas te include ground water-dependent ecosystems (e.g., fens and springs), slopes greater than 20% and areas with sensitive soils.	Please see Table 2.2-5: Design Features for the Como Forest Health Project, Watershed and Fisheries subheading, for buffer widths applied to wetlands and other sensitive water resources. Appendix Aprovides an updated list of BMPs to provide protection during timber sale operations. Timber sale layout provides for protection of smaller wetland areas and sensitive soils through adaptive boundary marking, selection of appropriate logging systems and identification of rehabilitation needs. Slope is considered during project reconaissance and layout phases to determine appropriate logging systems and harvest patterns, which in turn minimizes ground disturbance. Timber sale administrators and watershed staff monitor results to determine if rehabilitation treatments are needed.

Author(s)	Comment	Response
Strobel, Philip	The presence and handling of beetle-killed trees has the potential to impact public water supplies if it leads to organic loading of area water bodies that are sources of drinking water. Organic matter interacts with disinfectants used in the drinking water treatment process to form disinfection byproducts, which are a human health concern. Organic loading may also decrease oxygen levels leading to the release of metals such as arsenic, manganese, and iron from sediments. If the project area contains any public drinking water supply reservoirs, then we recommend that the Final EIS identify the reservoirs and provide an assessment of the potential for organic loading impacts to such drinking water supplies.	Please see Table 2.2-5, Design Features for the Como Forest Health Project, subheading Watershed and Fisheries (pages 2 -16 through 2-18) for protective measures that would prevent organic material loading to streams. Specifically, the RHCA stream buffer widths used to protect fish habitat would be effective in addressing this concern.

Author(s)	Comment	Response
Strobel, Philip	Given the potential for this vegetation management/forest health project to affect aquatic resources, particularly in the vicinity of the Lick Creek Subwatershed (where 32% of its area will be treated with vegetation management activities), we recommend that the Final EIS include the following information: * Available data and maps of existing aquatic resources, including quality and location of resources, i.e., wetlands, streams (intermittent, perennial, and ephemeral), rivers, lakes, reservoirs, and surface water drinking water sources; watershed conditions; water quality conditions; sediment loads; streambank conditions; vegetation cover; and fish population health and habitat. We note that a thorough narrative description, including a discussion of existing conditions, was included in Section 3.7 but inclusion of maps will augment the analysis contained in this section. * A map and list of Clean Water Act (CWA) Section 303(d) impaired or threatened water body segments within, or downstream of, the project area, including the designated uses of the water bodies and the specific pollutants of concern. We note that only a discussion was included for the CWA Section 303(d) impaired Lick Creek and anticipated impacts based on the WEPP model and updated field surveys. Maps would also augment the analysis in this section. * A map of municipal watersheds and designated source water protection zones, if any.	Please see the FEIS section 3.7.4, Environmental Effects (Hydrology section) for a description of methods and associated citations. Potential effects summaries are included in Section 3.7 (Summary of Analysis) and 3.7.4.11 (Summary of Effects). Potential sediment effects for Lick Creek are detailed in Table 3.7-7 (Lick Creek Alternative 2 Road Crossing Sediment Estimates). Design Features and Mitigation Measures (page 3.7-23) and Effects Common to All Action Alternatives (section 3.7.4.8, pages 3.7-20 and 3.7-21) both suggest there is potential for only minor, short-term effects from Alternatives 2, 3 or 4.

Author(s)	Comment	Response
Strobel, Philip	Further, the annual MDEQ smoke permit requires burners to implement Best Available Control Technologies taking into account impacts on energy use, the environment, and the economy. Inclusion of mitigation techniques and methods recommended by MDEQ in the Air Quality Section of this document is useful in understanding the joint agency responsibilities in air quality management.	We usually include MDEQ mitigation measures in the burn plans. Some mitigation measures are listed on pages 3.14-9, 3.14-10, and 3.14-19 of the FEIS. When the annual permits are issued for current burning we refer back to the web page for the latest version of the burn permit and BACT language http://deq.mt.gov/AirQuality/SmokeManagement.mcpx) Generally the Best Available Control Technology (BACT) for open burning is defined in two places for open burning 1) Administrative Rules of Montana 3/31/07 pages 17-391 to 17-393 (http://www.deq.mt.gov/dir/legal/Chapters/Ch08-toc.mcpx) and 2) it is updated yearly for the issuances for United States Forest Service (USDA) Smoke Management Permits. The state of Montana issues permits to burners who are classified as major open burners. A major open burner is any person, agency, institution, business, or industry conducting any open burning that will emit more than 500 tons per calendar year of carbon monoxide or 50 tons per calendar year of any other pollutant regulated, except hydrocarbons (Administrative Rules of Montana, Chapter 17.8, Subchapter 6, rule 17.8.610) http://deq.mt.gov/AirQuality/SmokeManagement.mcpx
Strobel, Philip	To ensure that proposed project activities do not adversely impact aquatic resources, we also recommend that the project -specific design criteria include the following:	There are no range improvements within the activity areas. Revegetation efforts on disturbed areas would be monitored for implementation by the Timber Sale Administrator and watershed staff during activities, and would be monitored for effectiveness by the watershed staff after the sale closes. Road closure methods include re-contouring road junctions, installation of gates, or other barriers where necessary to prevent vehicle access. These closures are montitored annually by field going staff, as well as Law Enforcement Officers.

Author(s)	Comment	Response
Strobel, Philip	Construct unavoidable road stream crossings during periods of low flow to avoid fish spa'wning and incubation periods, and/or dewater relevant stream segments prior to construction;	The action alternatives include one culvert replacement in Lick Creek, which is a fish-bearing stream. The Forest's standard operating procedure is to apply for a State of Montana Stream Protection Act permit when the project will occur within a year. During this process the Forest consults with the State biologists to ensure that construction proceeds in a manner that minimizes impact to fish and aquatic ecosystems. The discussions and permit process includes site specific measures to limit impacts and maximize post-construction benefits to the fishery.
Strobel, Philip	Specify steps to protect range improvements such as water developments and spring enclosures;	There are no range improvements within the activity areas. Revegetation efforts on disturbed areas would be monitored for implementation by the Timber Sale Administrator and watershed staff during activities, and would be monitored for effectiveness by the watershed staff after the sale closes. Road closure methods include re-contouring road junctions, installation of gates, or other barriers where necessary to prevent vehicle access. These closures are montitored annually by field going staff, as well as Law Enforcement Officers.
Strobel, Philip	Monitor impacts to water quality when treatments are proposed adjacent to high value surface waters (Lake Como reservoir), and adjust BMPs/design criteria, if necessary;	Operational BMPs are included in the timber sale contract, are legally enforceable and are monitored by the Timber Sale Administrator, with help as needed from Forest watershed staff. The Forest has capability to add protective measures (e.g., sediment fence or straw bale barriers) if monitoring results suggest initial efforts are not effective. Appendix A displays the pertinent BMPs and explains how they are monitored and enforced. Planning BMPs and design features (FEIS Table 2.2-5) provide for extensive buffer strips between water resources and ground-disturbing activities, drastically reducing the potential for sediment contribution to local streams.

Author(s)	Comment	Response
Strobel, Philip	Monitor impacts to water quality when treatments are proposed adjacent to high value surface waters (Lake Como reservoir), and adjust BMPs/design criteria, if necessary;	Operational BMPs are included in the timber sale contract, are legally enforceable and are monitored by the Timber Sale Administrator, with help as needed from Forest watershed staff. The Forest has capability to add protective measures (e.g., sediment fence or straw bale barriers) if monitoring results suggest initial efforts are not effective. Appendix A displays the pertinent BMPs and explains how they are monitored and enforced. Planning BMPs and design features (FEIS Table 2.2-5) provide for extensive buffer strips between water resources and ground-disturbing activities, drastically reducing the potential for sediment contribution to local streams.
Strobel, Philip	Monitor effectiveness ofroad closures and adjust closure methods, if necessary;	There are no range improvements within the activity areas. Revegetation efforts on disturbed areas would be monitored for implementation by the Timber Sale Administrator and watershed staff during activities, and would be monitored for effectiveness by the watershed staff after the sale closes. Road closure methods include re-contouring road junctions, installation of gates, or other barriers where necessary to prevent vehicle access. These closures are montitored annually by field going staff, as well as Law Enforcement Officers.
Strobel, Philip	Monitor revegetation efforts for 5 years or until success is achieved.	There are no range improvements within the activity areas. Revegetation efforts on disturbed areas would be monitored for implementation by the Timber Sale Administrator and watershed staff during activities, and would be monitored for effectiveness by the watershed staff after the sale closes. Road closure methods include re-contouring road junctions, installation of gates, or other barriers where necessary to prevent vehicle access. These closures are montitored annually by field going staff, as well as Law Enforcement Officers.

Author(s)	Comment	Response
Weisbecker, Fred	The Bitterroot Backcountry Horsemen Chapter would like to express its support of the proposed forest vegetative management project known as the Como Project.	Comment will be taken into consideration by the Deciding Official.
Weisbecker, Fred	We have no personal preference to the three options offered in the proposal. There seems to be very little difference between the three.	
Weisbecker, Fred	As horseback riders we do have an interest in the roads and trails that course through the land under consideration. It has become a very popular but unofficial network of riding trails. Fortunately the Darby Ranger District has been in constant touch with our group as the plan has moved forward. They have solicited our input from day one. We are fully aware of the few roads that may be put into storage and are fine with that. We do hope that somehow as a result of the Project we can end up with a decent horse trailer parking site along Lick Creek Road (rd # 5621).	
Weisbecker, Fred	our Chapter continues to support the efforts by the US Forest Service to create a more healthy fire resistant forest especially in the wildland-urban interface. We applaud their efforts to manage the forest from an ecological point of view.	Comment will be taken into consideration by the Deciding Official.

Author(s)	Comment	Response
Wood, Floyd	Much of it was logged 40 years ago and (ruined) my favorite hunting areas.	A diversity of habitat components neccessary for a sustainable big game population will be managed for in all of the action alternatives including thermal cover, hiding cover, security areas, proper forage:cover ratios and forage quality. Alternative 4 was developed partially in response to concerns about big game habitat within the Como Forest Health Project Area and would retain the most thermal and hiding cover among the action alternaives.
Wood, Floyd	It will speed the spring runoff in Lick Cr. causing more erosion than usual due to higher runoff it will put more dirt in Lick Cr. and lye from ashes[...]Lick Cr. according to the DEQ is impaired by aluminum chlorophyll and phosphorous.	Please see the FEIS Hydrology section 3.7.4.1 - Methodology (page 3.7-13), Vegetation Management and Water Yield Increases for discussion on runoff patterns. Hydrology sections 3.7.1.1, Effects Common to All Action Alternatives (pages 3.7-20 and 3.7-21) and section 3.7.4.8 (pages 3.7-20, 3.7-24 and 3.7-25) for sediment effects discussion. Table 2.2-5, Design Features for the Como Forest Health Project, Watershed and Fisheries sub-heading (pages 2-16 through 2-18) include protective measures that are effective in minimizing the water resource effects of the proposed activities.
Wood, Floyd	It is got cutthroat trout and maybe bull trout in it this logging would dirty the water warm the water and reduce late summer water supply	Please see the FEIS Hydrology section 3.7.4.1 - Methodology (page 3.7-13), Vegetation Management and Water Yield Increases for discussion on runoff patterns. Hydrology sections 3.7.1.1, Effects Common to All Action Alternatives (pages 3.7-20 and 3.7-21) and section 3.7.4.8 (pages 3.7-20, 3.7-24 and 3.7-25) for sediment effects discussion. Table 2.2-5, Design Features for the Como Forest Health Project, Watershed and Fisheries sub-heading (pages 2-16 through 2-18) include protective measures that are effective in minimizing the water resource effects of the proposed activities.

Author(s)	Comment	Response
Wood, Floyd	The lynx martin fisher and goshawk would all be effected the game habitat would be further ruined. If in fact enough cover had improved after the last logging.	Habitat availability and existing conditions for Canada lynx, fisher and marten are described in their respectful sections of the wildlife report, underneath the Affected Environment headings. Also, for each of the species listed above, the project effects for each alternative are described in those same sections of the wildlife report, underneath the Environmental Consequences headings. The Canada lynx section begins at 3.3.3 the fisher section begins at 3.3.6 and the marten section begins at 3.3.11. Habitat conditions and project effects for goshawks are described in the Forest Land Bird section of the wildlife report, underneath the heading 3.3.14.
Wood, Floyd	I want to purpose(propose) the no action alternative for many reasons.	Comment will be taken into consideration by the Deciding Official.